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ABSTRACT

The document offers guidelines for van or bus drivers transporting handicapped students to and from school. Part 1 offers an overview of adaptive transportation services and gives specifics on providing services to the blind/visually impaired, hearing impaired, mentally retarded, physically handicapped, behaviorally disordered, learning disabled, and speech impaired. Also considered are adaptive equipment, general handling techniques, carrying, seating and securing, loading and unloading, and emergency procedures. Part 2 contains tables with guidelines covering 12 orthopedic aids most commonly used by student passengers and more than 62 handicapping conditions. Addressed for each condition (listed alphabetically) are characteristics, treatment, and adaptive transportation needs. A final part focuses on behavior management of students in transit. Key concepts in behavior management are addressed, including determining appropriate/inappropriate behaviors, dealing with individuals, and dealing with situations. Among the specific conditions listed are the following: arthritis, artificial limbs, personality disorders, cerebral palsy, epileptic seizures, obesity, paralysis, and stroke. (SW)

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TRANSPORTING HANDICAPPED STUDENTS: DRIVER MANUAL

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DEDICATED TO:

ALL HANDICAPPED STUDENTS WHO REQUIRE ADAPTIVE TRANSPORTATION, AND ESPECIALLY TWO FORMER PASSENGERS:

Chet H., who died of Muscular Dystrophy at age 13, December 30, 1980:

Of all those in this world
And the next,
There are those who know
Their aim, their duty to grow.
But some come,
And go, so quickly.

Tammy G., who took her first 43 steps without crutches, January 12, 1981.

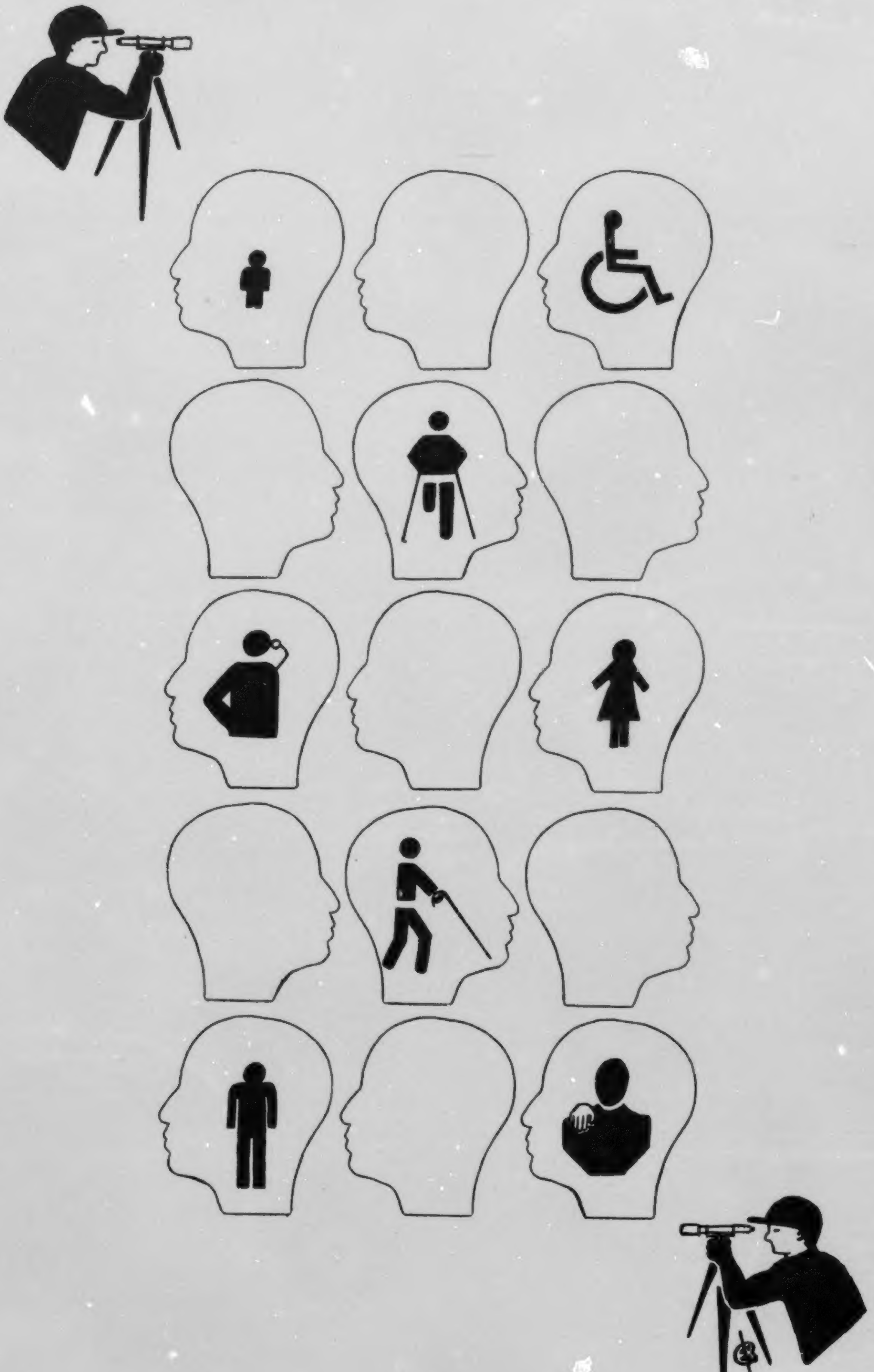
PREFACE

Drivers come in all shapes and sizes, ages, dispositions, and degrees of experience. They vary from G.E.D.'s to Ph.D.'s. Drivers may be parents of a student being transported and may transport other students along with their own. They may be hired by the school system as an employee or contracted by a private provider to the school system. They may be an employee of a firm or an independent contractor. All have something in common: handicapped student passengers.

Transporting handicapped students of all ages has become an increasingly complex task because of door-to-door transportation and the enrollment of more seriously or multiply handicapped students in schools. The need has never been greater for drivers with more specific information about the individual students they transport.

Drivers are people who are genuinely concerned and desire to better serve the needs of their handicapped passengers. They are willing to implement well thought out suggestions. Suggestions in this book are in terms of driver behavior or student characteristics. Student behavioral information has been taken out of the books and reduced from theory into practical suggestions for drivers to implement. Behavior management techniques useful in transit are likely also to be helpful in the classroom or at home. Behavior management and student characteristics information about individual passengers must be accurate for every student and acceptable in content to parents. Student information is confidential. This information cannot be shared by the driver with others except by written permission of the school and parents. The driver is authorized only to student information required to meet their transportation needs.

The science of transporting handicapped students is not all that complicated. Once terms are understood that represent characteristics of passengers, the suggestions for meeting student transportation needs are fairly simple. There are many services individual students may require to enjoy the most appropriate, safest and most efficient transportation experience. Students with a variety of handicapping conditions have a variety of transportation needs. In this manual are several hundred practical adaptive measures to be taken for handicapped students who are transported on regular or specially equipped vehicles. Many of those special adaptations deal specifically with driver behavior or performance requirements. Parents must understand that adaptations are being provided on the school vehicle by the driver for their student. When teachers and drivers join parents in agreeing on what services should be provided the student, then students can be reasonably assured of the best transportation service possible. The information in this book is positive, practical and applicable to the transportation setting. The author knows, for he has been a driver for handicapped students and speaks from actual experience.



PART ONE

ADAPTIVE TRANSPORTATION SERVICES:

Students of all ages who become at risk of injury to themselves or others at any point during transportation require special services. Students require special assistance to reduce failure, to increase accessibility and mobility to school, home and other sites in the community. Adaptive transportation services* can be described for each type of handicapping condition in students, by age (including preschoolers, children, adolescents and young adults) and by mode of transportation (cars, vans, school buses, city transit, other). Adaptations made per student passenger are provided by the driver and if present, an aide. Only when individual passengers are evaluated can realistic patterns of adaptive transportation services be recognized and planned. Guidelines in this book will assist in evaluating all handicapped student passengers to better understand their needs in transit.

Adaptive transportation services described in this driver's manual are for professional, volunteer drivers and parents who drive their own handicapped child or may drive other children with special needs. Adaptive transportation services described in this book are defined by category of handicapping condition (See Part Two of this book, Pg. 54). When certain students have more than one handicap, multiple handicapping conditions are described in Part Two by checking each type of handicap in the Guidelines. The driver can better understand multiply or singly handicapped student passengers when the guidelines in Part Two are used for each passenger who is handicapped.

STUDENT'S SPECIFIC ADAPTIVE TRANSPORTATION SERVICES: OVERVIEW

School systems have the greatest impact on meeting more handicapped students' transportation needs than do parents, city transit or other transportation providers. Most of the drivers using this manual will be working for or under contract with school systems. City transit workers and parents will find the contents useful for their passengers, too.

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*Adaptive transportation services are intended to mean a variety of individually appropriate helping services provided to persons experiencing limitations in their ability to meet their own transportation needs.

Student need for adaptive transportation services changes with age. Greater differences may be expected in adaptations required for preschoolers than for children of elementary school age. Adolescents with particular handicaps must be treated much the same as adults with the same types of disabilities. Due to their increased size, maturity and physical needs approaching those of adults, adolescents have to be treated differently from children in elementary or preschool. They expect and demand to be treated differently.

All modes of transportation are open to children and adolescents with various handicapping conditions when appropriate adaptive measures are taken to meet their individual needs. Preschoolers, whether handicapped or not, require a complete range of adaptive transportation services including specially trained drivers, some adaptive equipment on board (shorter, lower steps, seat belts for all passengers, extra padding on the seats, smaller seats or larger, three-passenger use of existing seats, etc.), and door-to-door services. They may frequently require an aide on board in transit where a mix of handicapped and non-handicapped preschoolers are being transported. Children or adolescents in all categories of handicapping conditions require specific adaptive transportation services unique to their particular individual strengths and weaknesses. Passengers of any age with physical handicaps[(use of canes, braces, walkers, crutches, wheelchairs (electric or manual), etc.] require accessible vehicles.*

Mental retardation in students in the mild to moderate (pgs. 92-93) range permits regular school bus or van services to be provided for safe and appropriate student transportation. Severe or profound retardation (pgs. 90-91) in students is often associated with other handicapping conditions (or the multiply handicapped) and requires extensive services including the use of accessible, hydraulic lift-equipped vans or buses with individual equipment modifications available on board. Door-to-door services and a driver aide may be required.

Behaviorally disordered (pg. 65-68) students may be transported with students of their same age group on regular buses, routes, and schedules. Their success being transported with regular students depends upon their individual characteristics, their response to stress on the regular bus with the regular driver and other students. While they do not require accessible vans or buses with special equipment for their transit needs, they do require extensive intervention from the driver during transit.

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*Accessible vehicles: vehicles that have special equipment or design to help boarding, unloading and seating passengers.

Learning disabled (pg. 86) students do not require accessible, specially equipped buses or vans for the transit needs. In many ways, the special transportation service needs of the severely learning disabled students resemble those of the behaviorally disordered. Mildly learning disabled students are often successfully transported along with their non-handicapped peers on regular routes and vehicles, without special training of the drivers.

Visually impaired or blind (pgs. 110-111) students require extensive adaptations in transit from the school system or others. When the visually handicapped (blind and/or visually impaired students) have other handicaps that complicate their transit needs, they require transportation provided completely by others rather than by their own means. All modes of transportation services are open to students with visual handicaps so long as particular and extensive measures are taken.

Hearing impaired (pgs. 60-64) students experience communication-related difficulties during transportation. Such communication difficulties of talking and listening require adaptations by the driver. Regular vehicles without special equipment may be used. Many schools may choose to transport hearing impaired students separately from their hearing peers due to supervision problems and transportation services they require. All modes of transportation are open to these students. Use of specially trained drivers who have skill in using the same communication techniques of their student passengers is preferred. Such drivers may learn signing*, lip reading or other techniques. Students with mild to moderate hearing loss may be transported on regular buses, vehicles and routes, and with regular drivers. Seating may be the important factor on the regular vehicle to enable the student to be aware of events in transit or to enable him to interact with the driver and other passengers against the background of typical noise and distraction on the vehicle. More seriously hearing impaired need more extensive services.

Speech impaired (pg. 106) students, unless they have other additional handicapping conditions, require very few adaptations in transit. All modes of transportation are open to those with speech impairments. Communication demands for expression of speech require careful and sensitive handling by the driver on the regular school vehicle. Much of the need to communicate during transit may be eliminated for speech impaired students who may experience frustration, concern and withdrawal from attempts to talk with others. Unless speech impaired students have other additional handicapping conditions, they require very few adaptations in transit. All modes of transportation are open to those with speech impairments. Communication demands for expression of speech require careful and sensitive handling by the driver on the regular school vehicle. Much of the need to communicate during transit may be eliminated for speech impaired students who may experience frustration, concern and withdrawal from attempts to talk with others. Unless interaction on the bus is called for in their special education program, the driver may not need to talk with students who have speech difficulties other than to give request or directions without asking for responses.

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*Signing: use of hands, gestures and facial expressions to speak.

Physically handicapped students have a wide variety of disabling conditions that require a look at each student's individual transit service needs. Many students with physical handicaps are able to be transported safely and appropriately on regular school buses or vans without adaptive equipment, lifts or other devices on the vehicle. Personal adaptive equipment (canes, walkers) may have to be transported with the student on the bus. These must be provided for in transit. Others who have more severe forms of handicapping conditions that limit their ability to walk may require accessible, lift-equipped and/or specially designed vehicles to be safely and appropriately transported.

Multiply handicapped may be any combination of handicapping conditions listed above found in the same person. Their services are specific to the individual involved and may be determined by viewing each student's handicapping conditions separately in the Adaptive Transportation Guidelines in Part Two of this book. When all conditions are noted, a combination of adaptive transportation service needs will emerge when the multiple guideline recommendations are consolidated into a single plan for transportation services. Only then can the extent of assistance required for individual multiply handicapped students be understood.

ADAPTIVE TRANSPORTATION FOR BLIND/VISUALLY IMPAIRED

Visually impaired or blind students depend on others for their transportation. Operating moving vehicles is obviously not advisable for students who have visual handicaps or are sight disabled. Physical mobility to and from transport sites, work, home and school, while in transit and in vehicles is a major concern for students with visual handicaps. All modes of transportation are open to visually impaired or blind students. Personal cars or taxis are on a demand schedule*, but city bus services are dependent upon fixed schedules and established pickup sites, neither of which may be convenient to the students needs for transportation. Demand vans* or demand buses* have a reasonable amount of flexibility in scheduling services for their passengers and in providing special pick up sites including door-to-door services for the sight disabled.

Particular problems exist for the sight disabled who wish to select their own route to the destination. They may experience difficulties moving between home and their departure site if not provided door-to-door transportation. Curbside boarding of the vehicle is considered the safest prodedure. Use of driver assistance in boarding or unloading may be required for students who are not confident in their boarding skills or who are unfamiliar with boarding equipment, vehicles or safe procedures. Selecting a seat may be a problem in a crowded vehicle, where incidental touching of others may not be considered appropriate. Assigned or designated seating may be recommended for these passengers to assure appropriate seating availability and use. Securing the seat belt when equipped may be a problem, if it is not readily available on top of the seat.

Securing passenger equipment or parcels in a safe place, one which is not in the way of other passengers or blocking the aisle, is necessary. Some visually impaired students may not quickly orient themselves to others who do not talk or indicate their presence. In some instances, passenger interaction may be nonexistent or inappropriate when visually impaired passengers do not know who is present. Not being able to observe the vehicle's progress, its approach to the passengers' destinations, or being able to judge when to prepare for unloading requires that students be notified by the driver in advance of arrival. Students may experience limited mobility to the service site from departure site of the vehicle unless delivered to the door by the driver or aide. Students may also experience limited accessibility if unfamiliar with the layout of the building entrances or the procedure on gaining access to services once inside.

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*Demand schedule, van or buses: all vehicles that can provide transportation specifically at the request (demand) of passengers who request them. They do not usually run on a fixed schedule, but run when requested by handicapped passengers.

Adaptive measures for transporting visually impaired students may include:

1. Driver/aide rehearsing verbally with their passengers, driving schedules, pickup points, departure times and other details while enroute or in advance of departure (this may be done by the driver over the phone with each student or parent).
2. Informing the student what the direction of his exit is relative to the destination. A series of maneuvers may be necessary to orient the student to landmarks, curbs, street names, directions and hazards enroute to the service site from unloading.
3. Informing the student at time of unloading of what street intersections are near, relative to the intended destination of the student.
4. Suggesting or assigning seating in the vehicle that will not disturb other passengers or block aisles for passenger, driver, or aide movement.
5. Driver, aide or other passengers carrying on a conversation with the students to answer questions and to assist students to maintain orientation during transit and reduce personal loneliness.
6. Alerting students of travel progress.
7. Alerting students when vehicle is nearing their individual destinations.
8. Driver providing information about special conditions or hazards not ordinarily present when students unload.
9. Driver may escort students to their building entrance or inside the building if unusual hazards exist.

Overall, adaptive measures taken by the driver should be dictated largely by the students themselves, who may have all the skills necessary to overcome any apparent limitations or hazards during transit. Driver knowledge of the students' abilities, strengths and weaknesses, their preferences and attitudes toward independence in transit will be the major factor in determining what specific assistance is needed. Help when it is not needed is not help, but a hindrance.

ADAPTIVE TRANSPORTATION FOR THE HEARING IMPAIRED

Hearing impaired students experience certain difficulties during transportation. Most of the needs of the hearing impaired have to do with communication, or talking and listening difficulties with others. All modes of transportation are open to hearing disabled students. Personal cars or use of taxis on a demand schedule may be appropriate. Hearing disabled adolescents are able to drive themselves, if of age and licensed, when they have their own means of transportation. Scheduled city bus services depend on fixed schedules for all passengers who use the service. Fixed or common pickup sites for all students on a route may not be appropriate for students with hearing disabilities. Unless the students have developed fairly high degrees of skill and personal independence in noting traffic and other pedestrian hazards enroute to the pickup site, door-to-door services may be required. Students require door-to-door transportation who may not be able to hear the approach of traffic, emergency pedestrian situations with horns, and other hazards. City buses do not ordinarily provide door-to-door service. Demand schedule vans or buses have a flexible scheduling system and may provide door-to-door services whether through city transit, public or private provider, or the school system.

There are particular problems for hearing disabled students who wish to obtain information about transit by verbal means on the telephone. Transit availability, scheduled public services, changes of schedules, determining new site destinations or routes and other new information may not be acquired over the phone due to serious hearing limitations. Obtaining meaningful and complete information over the phone is difficult, if not impossible, for the hearing disabled. Telephone amplification may help if available, depending on the severity of the hearing loss and the skill of students in understanding distorted speech of others, without being able to read lips. The severely and profoundly deaf may not be helped with such electronic gear without recourse to TTY (telephone service) in their home and at the transit service office. Changes in transit routine, schedule, times of departure or arrival all seem to disorient the hearing disabled students, who must then cope with new adaptations and new information in daily life. They may not be sure that the newly acquired information is accurate, reliable or that they understood others properly or fully.

Student communication with the driver and other passengers may be limited to driver level of skill in communication with the hearing disabled student. Understanding of communication depends on the passengers' ability to speech read (read lips) and to interact with hearing people, including the driver. Unsuccessful talking or listening to the driver and other passengers imposes serious limitations of mobility between home and school on hearing disabled students using school transportation services. Adaptations must be made for these passengers. Drivers may be required to communicate through writing with pen and tablet for those students who are old enough to be able to understand written language. For students not yet able to write or read, the ability to successfully speech read information from others, including the driver, is required. Speech reading is not possible unless the student faces the driver or views the driver's lips in the rear view mirror. When new or important information is to be shared with students, manual or sign language use by the driver may be required. School coordination of the method used to communicate between driver and students should be clear. Improper use of various communication techniques not taught in the classroom may disrupt the learning process and disorient passengers further from proper and successful communication with others in transit. Communication may be too loud or soft between students with hearing problems and others for successful hearing to occur. Much practice in many situations is required for hearing disabled students before skill is developed in communication with hearing people. Background noises in transit and the voices of other passengers may limit the person with partial hearing who is seeking to understand spoken information.

Adaptive measures for transporting hearing disabled students may include:

1. Driver should seat students toward the front of the vehicle seating area where driver and students may interact and hear new information more successfully.
2. Students may be seated to interact with the driver to view the driver's face in the rear view mirror without distracting the driver or impairing safe operation of the vehicle.
3. Drivers may learn manual or sign communication methods, may speak clearly and slowly with face visible to hearing impaired students. Driver may learn communication techniques from the teacher to assure uniformity of communication style with the passengers.
4. Transit services may have amplification equipment or TTY services in their offices for the hearing impaired.
5. Voice amplification equipment may be installed on the vehicle, but at considerable expense.
6. Prior and advance notice in writing to hearing impaired students regarding changes in transit schedule, changes due to emergencies or weather conditions, or other events is required in orienting the student to successful transit.
7. Driver must establish and maintain a good communication relationship with the passengers to understand and respond to likely areas

of passenger concerns, abilities and need for assistance in transit.

8. The driver may be required to counsel and guide the students who may be communicating inappropriately (too loud or soft, inappropriate language, gestures, etc.).

Overall, hearing impaired students have mobility in the community depending on their maturity, social judgement, skill, use of familiar routes, schedules, and drivers who understand them. Changes demanded of hearing impaired students during transit may reduce mobility and accessibility until adjustments and new learning have been accomplished. Communication and exchange of helpful information with others is the most important adaptive transportation service for hearing impaired students.

ADAPTIVE TRANSPORTATION FOR THE MENTALLY RETARDED

Mentally retarded students experience difficulties during transit and require the most extensive adaptations when they have other handicapping conditions. When the retarded have sight, hearing or physical disabilities, their adaptive transportation problems and service needs are compounded. Mildly retarded students, however, may have very few additional transportation needs. In terms of adaptive transportation service need, mental retardation in students is a significant limiting factor in gaining access to the outside world when present in more than moderate degree, or when compounded by several handicapping conditions.

Most of the needs of the mentally retarded are associated with social and personal or decision-making difficulties during transit. All modes of transportation are open to the retarded person without additional handicapping conditions. Each transit mode provides a unique challenge to the retarded in meeting his own transportation needs. Many mildly retarded students are able to secure licenses to drive when of age, and may have their own means of transportation. Most retarded students who have more than mild limitations do not have their own transportation means and are dependent upon others for transit service. Personal cars or taxis driven by others provide appropriate transportation as long as the driver is fully aware of the retarded passenger's daily schedule, pickup site, destination, time of pick up or departure and arrival at the destination site. Drivers must be fully aware of route or alternative routes and be willing to assist the retarded passengers in preparing for transit. City transit provides unique demands for the retarded, who must know scheduled times of service, pickup sites, when buses do not run, and what is not appropriate to bring onto the bus. Drivers are responsible for notifying the passengers that they have arrived at their destinations, knowing the passengers' destinations when they may not know it themselves, helping select appropriate seating, securing seating, preparing the passenger for transit and helping the passenger to avoid inappropriate interactions between the driver and other passengers while in transit. Demand van and demand bus systems providing door-to-door transportation can significantly limit transit problems and adaptive transportation service needs whether provided by the city transit system, a private provider, or the school system.

Moderately and severely retarded persons' adaptive transportation needs vary greatly. Only as individuals can they be evaluated to understand their adaptive transportation needs. Guidelines in this chapter for adaptive transportation services alone lack sufficient precision without individual evaluation accompanying such guidelines to develop proper and individualized service descriptions. Profoundly or severely retarded students are often multiply handicapped and require extensive services for their transportation needs. They are often unable to accomplish any transportation activities without direct, individual and intensive assistance from others.

Transportation training and supervision is required for many severely and moderately retarded persons who have mobility limitations. Many judgment and behavioral skill level performance problems during transit may be corrected through situation-specific training and repeated successful experiences by the retarded in transit. Problems demonstrated by the retarded are often associated with:

1. Inability to decide when to transport self or whether others should help with their transportation needs;
2. Difficulty selecting appropriate destination, knowledge of destination address, name of service or agency providing services at the destination;
3. Selecting appropriate mode of transportation. (This may be a problem due to personal limitations of funds, ease of transport to destination);
4. Selecting appropriate time of departure or arrival at destination while giving oneself enough time for adequate preparation and arrival to the point of pickup for transport;

5. Selecting time of arrival as a direct relationship with time of departure (Some mentally retarded persons will not know whether they will arrive on time, will not be able to tell time or understand punctuality, or will arrive too early or too late at their destination);
6. Selecting route by which to reach destination while in transit unless they have received specialized training and adequate preparation for this task;
7. Preparation problems for travel, including appropriate clothing, allowing enough time to reach departure point, bringing along excessive amounts of parcels, bundles, and other objects (even animals) not appropriate to the mode of transport;
8. Boarding vehicles safely and comfortably without assistance of the driver;
9. Use of adaptive boarding equipment for those who may have particular coordination or balance difficulties while boarding;
10. Selecting appropriate seating without disturbing others;
11. Securing seating when not in use by others;
12. Preparing for transport by attaching seat belts or other devices for safety in transport;
13. Use of appropriate interactions with the driver and others on the vehicle;
14. Demonstrating various inappropriate behaviors while in transit that may be disruptive to the driver and others or dangerous to themselves;
15. Failure to observe travel in progress or to know when vehicle is approaching the passengers' individual destinations;
16. Failure of many retarded students without specialized training to prepare for unloading, recognizing when to unload, or recognize destination upon arrival;
17. Failure to move to the service site without supervision or special training once the transport vehicle has left;
18. Reduced accessibility to building services due to the retarded student's own mobility and judgment limitations.

While many problems may be associated with retarded students during transportation where they are noted to fail or to function with less than satisfactory degrees of safety or success, it must be remembered that the mentally retarded can learn when properly taught. They do not for the balance of their lives stop learning skills which perhaps should have been learned earlier. Skills can be taught to them later in life as they are needed. Training that is specific, appropriate to the passengers' particular performance weaknesses and strengths, intensive, repetitive, and associated closely with the daily routines of work, rest, and leisure activities provides them with the skills they will need to be successful during transit.

Special education transportation training in the classroom is frequently not enough for the retarded student passengers according to their unique combinations of strengths and weaknesses. The driver must know each retarded student as an individual. The driver must respond to the retarded in learning situations while in transit, in addition to special education travel training for the retarded in the classroom. Impaired judgment and limited skill development in transit vary with each retarded student. Students successful transit depends on their background of specific travel experiences, learning, and training received to prepare them for the demands of transportation, whether on city transit, private carrier, or school system transportation. Drivers have an important role with these passengers along with special education in travel training with the retarded.

Training associated with transportation skills while in transit can be done by the driver without being obtrusive or offensive to retarded passengers. Great care and judgment must be exercised by the driver in not over-supervising retarded passengers. It is sometimes necessary to provide the retarded the dignity of making their own mistakes as long as such mistakes are not life-threatening. It is also equally necessary to follow up mistakes with sensitive, gentle instruction when retarded passengers recognize their mistakes and want to improve their performance.

Knowledge of retarded students' characteristics and personalities are most important in order for the driver to determine what assistance will be required and will be received by passengers during transit. Drivers need to communicate with parents, special educators, therapists, and other professionals who work with the passengers. This will permit joint efforts to effectively train passengers in the vehicle and in the classroom to overcome specific transportation-related difficulties. Where such training does not occur, the driver is obliged to provide adaptations to the retarded at such times when they do not request or want such assistance. A careful balance of concern is required from the driver between the right for retarded passengers to fail occasionally during transportation and the need for intervention when life-threatening situations exist or are likely to occur. Though adaptive transportation guidelines in Part Two of this book may be helpful for individual students with retardation who are passengers, no specific statements may be made about the passenger's individual need for services in transit without viewing each student as an individual with unique transit assistance needs. The driver is the professional who may utilize the guidelines as they fit his passengers provided in Part Two.

ADAPTIVE TRANSPORTATION FOR THE PHYSICALLY HANDICAPPED

Physically handicapped students experience a variety of difficulties during transit which require adaptive transportation measures. Physically handicapped students are the most diverse group of people with respect to transportation services. They vary widely in mobility and accessibility requirements. It is necessary to consider several types of handicapping conditions commonly found in students who are physically handicapped to determine specific transportation adaptations. Such types of conditions include childhood diseases leading to physical handicaps, birth defects and other medical problems shown in Part Two.

Most of the transportation needs of the physically handicapped are associated with mobility in and physical access to vehicles. All modes of transportation including car, taxi, van or bus are available to the physically handicapped given specific adaptations for their individual needs. The taxi or personal car can be modified to provide access to semi-ambulatory* students with orthopedic aids* or non-amulatory* persons using manual wheelchairs. Electric wheelchairs (pg. 113) may be too cumbersome to be used with personal cars or taxis. Vans with hydraulic lifts or ramps that can be operated independently by handicapped adolescents or adults are preferred over personal cars. An aide, or driver acting as an aide, is critical when non-ambulatory persons using wheelchairs cannot lift themselves in and out of chairs unassisted and seek transportation using the automobile.

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*Semi-Ambulatory: students who walk with difficulty, usually with the aid of braces or crutches.
*Non-Ambulatory: students who are confined to a wheelchair for mobility purposes.
*Orthopedic Aids: any device used with students to assist them in walking, moving limbs or balancing. Such devices include: braces, crutches, wheelchairs and other equipment.

Wheelchair-bound paraplegics (pg. 101) however, may have the personal strength and dexterity to provide for their own boarding and unloading needs with the proper adaptive equipment in good working order to assist them. Quadriplegics (pg. 102) are generally not able to utilize the automobile without major lifting and other assistance from an attendant or the driver acting as the attendant in transit. The automobile may be used when additional assistance and the proper equipment is available.

The van or bus offers the semi-ambulatory or non-ambulatory physically handicapped student freedom of movement in the community. Accessible vans or buses generally accommodate the transportation needs of the physically handicapped, no matter how severely limiting the mobility may be. Students with leg and arm casts, crutches (pg. 75), leg or arm braces (pg. 58), walkers (pgs. 112), combinations of braces and crutches, wheelchairs (both manual and electric, pg. 113), body casts, and adaptive chairs have reasonable access to most accessible, hydraulic lift-equipped buses or vans. Adaptive beds or roller beds require greater areas of movement for turning while boarding and unloading than other orthopedic aids for the physically handicapped. Adaptive beds or roller beds may not be used with vans and accessible buses due to their size and cumbersome weight. Persons may be transferred to a wheelchair while in transit and returned to another adaptive bed or roller bed at the destination if possible. Bed-confined physically handicapped persons may have to be transported via ambulance. Accessible vans or buses provide appropriate transportation for the majority of physically handicapped students.

There are particular problems for physically handicapped adolescents who cannot or prefer not to be physically lifted aboard a transport as younger children may be. They require different handling from that used with children. The process of lifting, unseating and reseating students can often be dangerous if not injurious. Care must be exercised in the general handling of all student passengers with handicapping conditions. The type of transportation selected may be dictated by what is available and accessible according to the passengers' physical conditions and personal skills in meeting their own transportation needs. Accessible vans or buses, when physically appropriate to transportation service needs, provide the opportunity for people to select time of departure and arrival at chosen destinations. The privilege of freedom of movement about the community does not generally exist for physically handicapped students except for transportation provided by parents in privately owned or accessible vehicles. Advance notice (up to 24 hour notification is common) is often required for demand accessible transportation provided by city or private transit systems.

School related transportation with routine bus routes providing door-to-door services with accessible buses or vans and informed, helpful drivers are preferred rather than demand vans or buses. After school hours, transportation is best provided by demand access vans or buses supplied by the city or private providers.

Mobility between various points in the community is limited for physically handicapped students by architectural or site barriers at the destination. Vehicle characteristics may impose barriers to physically handicapped students. Boarding the vehicle requires adaptive boarding equipment such as hydraulic lifts or physical assistance from the attendant or driver.

Selection of seating during transit is limited for those confined to wheelchairs. Floor-mounted or wall-mounted securing braces require special fitting of passengers' personal equipment to the vehicle. Spaces in the vehicle are typically arranged in a wheelchair-specific or individual-specific manner to provide proper match of equipment on the vehicle with passenger adaptive equipment. Widths of wheelchairs vary greatly with each passenger. Passengers with orthopedic devices are less seat- or location-specific in the vehicle for safe transportation than physically handicapped, wheelchair confined passengers. Storage of orthopedic hardware is a significant problem while in transit. Aisles must be kept clear to avoid mobility hazards for the driver and other passengers who are able to move about in the vehicle. When emergency braking occurs, loose orthopedic hardware becomes a serious if not lethal problem unless properly secured. Seating must be planned for specific physically handicapped individuals. Freedom of choice by physically handicapped students as to where they are permitted to sit with safety and comfort is not generally available. Assigned seating locations or securing locations for wheelchairs is the preferred mode for safety.

Preparation for transport may require driver or aide assistance for physically handicapped students, particularly hemiplegic (pg. 100) or quadriplegic (pg. 102) passengers. Making body adjustments while in transit may be beyond the physical abilities of these passengers who may have neither the ability, strength or coordination to straighten themselves during normal rocking or turning of the vehicle.

Passenger requests to the aide or driver for assistance while in transit are possible only for those who are able to speak. Those who have impairment of the speech center, however, are dependent upon others to notice their particular adjustment needs while in transit. Being able to observe progress of the transport vehicle toward the destination is not always possible for some physically handicapped passengers who have restricted control of head and eye movements, or limited vision along with other physical conditions.

Preparation for leaving the vehicle may be done by most physically handicapped students, except some non-ambulatory passengers and most wheelchair passengers. Such persons require others to release them from their securement or seating. They require movement toward the exit or hydraulic lift. The decision as to when and where to leave the vehicle is under the control of the driver, who must determine the best unloading site according to individual passenger's mobility needs. Physically handicapped students are obliged to be let out when and where the driver deems it appropriate. When architectural and site barriers curbside or enroute to the building or home are present, the driver is restricted to specific unloading locations. Adaptive equipment and aide services are generally identical in unloading as in boarding.

Passengers must be provided mobility to the home or school building as well as gaining room-by-room access to services required. The presence of site or architectural barriers requires the driver or aide to accompany the physically handicapped students into the building, to help with curbs, ramps, stairs, doors, elevators, hallways and other particular architectural characteristics of the service site. Hemiplegic or quadriplegic students experience architectural barriers at all points during transportation and require driver intervention and assistance.

Adaptive measures for transporting the physically handicapped student may include:

1. Advance planning with the passengers and their parents for movements in the community is required;
2. Coordination of transportation needs into a schedule of pickups and deliveries at specific points in the community;
3. Advance visits by the driver to all sites for inspection of architectural barriers, hazards or other apparent limitations for the known characteristic mobility limitations of each physically handicapped passenger;
4. A home visit and a detailed evaluation of passengers' physical capabilities during transportation, including examination of mobility equipment required, size and type for securing devices needed in transit, need for adjustments of wall or floor braces or securing devices on the vehicle;
5. Evaluation of passenger and parental preferences and desires for handling, and specific help required;

6. The passengers' attitudes toward their personal handicapping condition(s), willingness to help self or desire to be helped, level of dependence on others for self care, physical movements and adjustments required in transit and similar information;
7. Planning of routes to permit best mileage, safest ride, avoidance of road hazards, or emergency situations enroute, inclusion of maximum persons being served along the route, distance to the passengers' homes, ease of approach of the vehicle to the door or curb, length of ride and time to destination;
8. Evaluation by the drivers of other factors, including: positioning of passengers in the transport vehicle, needs for passenger interaction with driver and others in transit, socialization desired enroute with others, ability to observe the world outside where preferred, approach of the transport vehicle to the nearest curb or unloading site and other variables;
9. Per passenger planning of emergency health and accident procedures, including: provisions for epileptic seizures, choking, disconnection of devices or waste bags from the passenger, sudden illness or emotional responses and other variables;
10. Consideration of routes to emergency service locations, fire stations, hospitals and paramedic services at all points along the route;
11. Inspection of physical equipment adjustments to the transport vehicle, including: potential removal of the seats and inclusion of wall braces for wheelchairs, adjustment of seat belt and other restraining devices for fitting to the hydraulic lift area for best fit of the passenger equipment, consideration of the turning area required at the sidewalk or curb on boarding or unloading and aisle width dimensions in the vehicle for the new passenger;
12. Provision of emergency repair tools, equipment and devices for the particular passengers being transported, including: extra oxygen bottles, breathing devices for asthmatics, medications for specific passengers and for specific purposes or conditions of the passenger, first aid provisions, pillows and blankets for recovery from epileptic seizures, tools to do minor repair work on orthopedic equipment when needed, and other items;

13. Coordination of overall plan to provide adaptive transportation service for all passengers to be transported. The coordination plan must be written for drivers or relief personnel to fully understand and appreciate the necessary adaptive measures to be implemented for all physically handicapped passengers.

Adaptive transportation measures to accomodate specific physically handicapped students must be done on an individual basis in view of their handicapping conditions. Adaptive transportation guidelines presented in Part Two of this book for many handicapping conditions in students, childhood diseases leading to handicaps and various orthopedic aids commonly used by student passengers may assist the reader to evaluate passengers with physical handicaps. Such guidelines, however, do not substitute for individual passenger evaluation of mobility limitations and other peformance aspects of their transportation needs. Evaluation of each physically handicapped passenger together with the adaptive transportation guidelines for particular handicapping conditions brought into a coordinated, written plan provides all the adaptive measures that physically handicapped students are likely to require in transit.

ADAPTIVE TRANSPORTATION FOR THE BEHAVIORALLY DISORDERED

Behaviorally disordered students require few adaptive transportation measures specifically for their handicapping condition. Severity of behaviors in behaviorally disorded students range from imperceptible emotional conditions to consistently delinquent behaviors. Behaviorally disordered passengers may have more obvious problems at school, rather than during transit. Other behaviorally disordered students demonstrate the need for intensive adaptations while in transit, for example, incarcerated delinquents. However, delinquents are not generally associated with school system adaptive transportation services.

All modes of transportation are generally available to the behaviorally disordered, from personal automobiles for those students who are of age and licensed, to taxis, public and private transit systems, accessible vans or buses. School systems may readily transport behaviorally disordered students in conventional school buses with other non-handicapped students. Behaviorally disordered students are often mainstreamed* in order to facilitate their best adjustment. Relatively few behaviorally disordered students require adaptive transportation services according to the particular problems they experience in transit.

Behaviorally disordered students are normal in their mobility during transportation and their physical accessibility to services and programs in the community. Unless they have, in addition to their emotional problems, physical or mental conditions which further handicap their transportation behaviors, behaviorally disordered students may be essentially normal passengers in transit.

Adaptive measures may range from few efforts during regular transportation service delivery for some, to extensive adaptive transportation measures for others who demonstrate faulty social judgement, inappropriate behaviors which harm self or others during transit, confusion, fear or inappropriate aggressive states, anger or emotional outbursts.

Most adaptive transportation needs of the behaviorally disordered are associated with interaction with others and impaired social judgement. Persons with severe behavioral disorders may demonstrate inappropriate judgment during transit to the extent of their being similar to the severely mentally retarded in extensive adaptations required in transit. The majority of students who are behaviorally disordered are not likely to be so out of touch with reality that they cannot successfully utilize public or school transportation. When judgment is not impaired, they may be able to utilize transportation without problems other than management of a few specific inappropriate behaviors common to their non-handicapped aged peers during transit. Such measures may not be significantly different in type or degree from those problems exhibited by non-handicapped (regular) students.

Behaviorally disordered students who demonstrate significantly impaired social judgement require extensive adaptive transportation measures. Such adaptive measures require the driver to adequately and promptly supervise their behavior in transit. Drivers must not ignore inappropriate behaviors, must direct their passengers to perform in specific ways during transit, and inform them as to what is and is not appropriate behavior during transit. Mental illness in students may affect their ability to communicate their own needs to others appropriately. This condition necessitates the driver's and aide's close supervision their passenger during transit and provision of whatever is needed on an individual basis.

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*Mainstreamed: a commonly used term denoting a mixing of handicapped and non-handicapped students in daily living activities, attending school and classes together, traveling in the same bus together, etc.

Decision making abilities of behaviorally disordered students may be impaired, necessitating drivers and others to make decisions for the passenger at any point during transportation. This may involve when, where, by what mode or at what time to initiate transportation, by what route other than the fixed route, what the time of expected arrival at the destination is and other similar judgments.

Preparation for travel may require driver or aide services prior to boarding. The driver may choose to select seating for the student to allow for the safest, most easily supervised location on the vehicle and one that, for individual reasons, is less threatening to the passenger than other seating. Some behaviorally disordered students may forget to secure themselves with appropriate seat belts or other restraints or may misinterpret the purpose of such devices. They may become threatened or confused when forced to wear seatbelts.

Behaviorally disordered students may assume unnatural or uncomfortable positions while in transit and must be supervised. Interactions on the bus may seem inappropriate, sometimes highly emotional, or completely lacking in emotional content. Reactions by these passengers to various situations may be out of context with surrounding events or illogical to others.

Communication by the behaviorally disordered student may have other characteristics that, over time, tend to add to general verbal confusion among other passengers. Behaviorally disordered students may not observe when it is appropriate to leave the vehicle, when their destination has been reached, or when it is appropriate to prepare for unloading. Transport delays may be routine when behaviorally disordered students do not demonstrate appropriate timing for their transportation-related behaviors. Mobility to service site may be impaired. Students may require the supervision of the driver or aide to successfully reach the destination, building or room. Drivers should:

1. Establish a close personal relationship with student passengers, including knowledge of their home environments, service agencies working with them, and their parents and friends.

2. Develop styles of communication, mutually acceptable topics of conversation: hobbies, interests, and attitudes between drivers and passengers.
3. Understand the nature of the passengers' handicapping conditions and the behavioral self-control capabilities. (A good balance should be maintained between behavioral control measures used by the parents, the school and the driver for best results.)
4. Determine from the therapists, others or the passengers themselves what is realistic to expect from the passengers to establish what may be tolerated and what will not be tolerated in transit.
5. Driver and other passengers may act in common to reinforce positive, appropriate behaviors and to ignore or restrict inappropriate behaviors through social control measures, other passengers' opinions and acceptance or tolerance of passengers who demonstrate inappropriate behaviors.
6. Establish a tradition of expectations between passengers and driver during transit for smooth, uneventful transport.

Transporting behaviorally disordered students is an individualized process dictated by personal characteristices, need for supervision, appropriate restraints and controls in transit, need for freedom and tolerance and a real and continuing respect by the driver and other passengers of students as persons of worth.

ADAPTIVE TRANSPORTATION FOR THE LEARNING DISABLED*

Fewer adaptive transportation measures are required for the students with specific learning disabilities than for any other handicapping condition. Learning disabilities are academic problems in students and are not associated with other handicapping conditions. Problems of academic learning do not directly affect transportation-related behaviors in students. Specific learning disabilities in individual students amy produce specific needs for transportation adaptations though no particular pattern for groups of learning disabled students is known. All modes of transportation are available to the learning disabled students, including use of personal automobiles where they are of age and licensed, taxis, city bus transit, bus or van and school transportation vehicles for non-handicapped students. Learning disabled students should be provided adaptive transportation services in a normalized, mainstreamed manner with their non-handicapped peers. Adaptive boarding equipment is generally not required.

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*Learning disabled: See page 86.

Problems specifically demonstrated by some learning disabled students during transit include:

1. Impaired social and/or personal judgments (Students may experience difficulties determining when to transport self, where to go, by what mode of transportation is best to use, when to leave, when to arrive, by what route, if that option is open to the passenger, by what alternative routes and other personal considerations.);
2. Difficulty in getting organized prior to the trip, in becoming prepared for travel;
3. Boarding the vehicle, if students have a lack of coordination, balance, or lack confidence in boarding;
4. Impaired decision-making skills, to the point that the students may not freely or easily choose where to sit when given several options for seating;
5. Preparing self for transport along with securing seat belts when students lack skill in getting themselves organized for travel;
6. Inappropriate, strained or non-existent interaction with the driver and others from those learning disabled students who experience auditory perception problems or have a significant impairment of the ability to use the spoken language;
7. Impaired observation of progress of the vehicle, the approach of the students' destinations along the route and preparation for unloading. (The persons may experience confusion with the details of the situation rather than the overall purpose of the passengers arriving at their destination.);
8. Once unloaded, confusion as to the direction they must go to get to the service site, where they are in terms of street intersections or their location in the community via a defective or incomplete mental map, thereby reducing their ability to have access to the service site or building;

9. Once in the building, confusion with respect to which room to reach for the services intended.

The majority of learning disabled students are not significantly different from their age peers during transportation. Problems during transportation outlined above are descriptive of persons with very severe learning disabilities. Transportation problems exist more when adjustment problems may cause the person to function as a behaviorally disordered student during transit and as a learning disabled student in the classroom.

Adaptive transportation services to learning disabled students require the following driver assistance:

1. Careful planning with the passengers in advance for their routing travel system, the logical decisions they must make at any point during transit, including scheduling, routes, time of departure, arrival, waiting times, destination description, purpose of going to destination, what is to be done at destination, when to board the return ride, when to be at home and other considerations;
2. Information about the individual's travel requirements adequate to advise, counsel and intervene when the passenger makes errors in judgment;
3. Prompting the learning disabled student to be more aware when he is approaching his individual destination and when to prepare for unloading;
4. Aiding in interaction of student with driver and fellow passengers. Dealing with familiar topics, subjects of mutual interest during transit (e.g., sports, hobbies, weekend events, social events, entertainment, music, etc.) so that the learning disabled passenger may feel more confident in interacting with others.
5. If certain information is necessary for particular passengers, reminding them that they are going to a particular building on unloading, to a particular room in the building, how to get to that room and what they are going to do when they get there.

The learning disabled passenger does not typically require the extensive adaptive transportion services described above. Only when specific skills associated with transportation are lacking in the passenger would the suggested adaptive transportation activities be considered. The majority of learning disabled students are entirely normal for their transportation service needs. They require little or no adaptive transportation services provided by the school system.

ADAPTIVE TRANSPORTATION FOR THE SPEECH IMPAIRED

Few intervention activities are required to provide adaptive transportation services to speech impaired students. All modes of transportation are open to the speech impaired much like non-handicapped students of the same age. Speech impairment is often associated with other handicapping conditions. For multiply handicapped students with speech impairment, consideration of each handicap with respect to the various adaptive transportation needs will be necessary. In Part Two of this book are offered adaptive transportation service guidelines per handicap.

With the multiply handicapped student who is speech impaired consideration of each of the student's related handicapping conditions adaptive transportation service guidelines will be necessary. Consolidation of recommendations for adaptive transportation across all handicapping conditions may offer a realistic picture for multiply handicapped student passengers with speech impairment.

Persons with the single handicap of speech impairment generally experience uneventful limitations in their ability to be transported or to transport themselves if of age. Students with speech impairments may hold drivers licenses when certified to drive and may have their own means of transportation. Problems of speech impaired students occur during transportation only when speech with others is required. Limited exchange of information by speech may occur between this passenger and others. It may be difficult for the speech impaired students to discuss routes for public modes of transportation via telephone or in person. They may not be able to make themselves and their needs for specific transit information known. The driver attempting to help may not understand the student's needs. Communication with the driver and others may be severely limited for persons who may stutter* or speak unclearly. Aphasic* students who have experienced injury to the brain or a stroke (See Part Two, pg. 108, under stroke) may have affected the speech center. They may not be able to carry on a meaningful conversation, may not be able to respond appropriately or in a timely manner with

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*Stutter: interruptions in the smooth flow of speech.
*Aphasic: damage to the speech center of the brain.

others via speech, or to make simple verbal requests for transportation-related information from others. When speech impaired student passengers have questions, when they experience confusion or uncertainty in transit, speech communication to gain information may be required. Persons with speech impairments may experience slow and tedious rates of information gathering from others due to their own speech limitations. Being understood by others and expressing preferences, opinions or giving others information is limited with the speech impaired. Accessibility to services in the building may be impaired when speech is required by the passengers in obtaining information, such as directions within the building to particular rooms. Without stating what their needs are to others via understandable speech and ultimately gaining access to the services they need, they may experience real transportation limitations.

Adaptive transportation services to the speech impaired students may include:

1. Written or printed information exchanged between the speech impaired passenger and the driver or others when the students may be able to read such information and gain understanding of transit services;
2. Rehearsal of routes, schedules, points of departure and arrival along with other specific steps the passenger must perform during transit;
3. Introduction of new information, emergency information, unusual or unplanned events during transportation by the driver's speaking for the passenger in anticipating his needs, the use of written material the passenger may read when able, or physically directing the passenger to notice situations of direct concern to his welfare or safety during transit;
4. Development of familiar and comfortable topics of discussion during transit to put the speech impaired student at ease (otherwise, he might choose not to talk at all in transit;
5. Awareness of the individual characteristics and personality of each passenger to fully appreciate and meet individual needs during transit.

Speech impaired persons may require extensive adaptive transportation services when the passenger has speech problems along with other handicapping conditions. Multiply handicapped student passengers with speech impairments may require multiple adaptations in transit. Sensitivity and knowledge of the individual passenger by the driver may preclude most problems the speech impaired passenger may experience during transit. Speech impaired passengers with no other handicapping conditions require few adaptations in transit.

ADAPTIVE EQUIPMENT FOR HANDICAPPED PASSENGERS

Special education services are defined for each student who qualified by the school system special education placement committee. This process conforms with Federal Public Law 94-142. The services for each student are expressed in terms of the Individual Educational Program (IEP). One of the elements of the IEP should describe adaptations made by the student and/or the school transportation system for meeting individual transportation needs.

Many types of equipment adaptations can be made for handicapped student passengers according to individual need. Personal adaptive equipment must be transported with students to and from school. Vehicle equipment adaptations may also be required. There are two approaches for integrating handicapped students with adaptive equipment requirements onto regularly equipped vehicles or vehicles that are specially equipped:

1. Adapt handicapped students to the transportation system available.
2. Modify the transportation system to adapt to the students transportation service needs.

Either or both of these strategies may be appropriate on an individual student basis for school systems to consider.

In adapting the school, public or private transportation system to the students, the system must undergo change. One of the most important components of system change is the equipment provided during transit. When schools modify their transportation systems to accomodate to handicapped students, consideration for several variables is necessary:

1. Accommodation to student personal adaptive equipment.
2. Driver adaptations,
3. Different use of regularly equipped vehicles,
4. Use of specially equipped vehicles.

Only when personal transportation skills are not sufficiently developed do students require adaptations from the school transportation service. Handicapped students can learn appropriate transportation behaviors and independence if taught by special educators, drivers and parents. School system adaptations help to reduce student transportation failures and to provide faster, safer, more efficient, more economical and convenient transit.

The focal point of the adaptive transportation effort is on the handicapped passenger. Adaptive transportation does not consist solely of adaptive equipment provisions. There is no substitute for informed passengers and drivers. Certain adaptations can still be made for the passengers within their own resources or with the aid of the driver without sufficient or appropriate adaptive equipment. Adaptive equipment is an important aid to the driver but not the primary service required. Personal resources of handicapped students are required to meet their own transportation needs, to board the school bus, to secure seating, behave appropriately in transit, and to arrive at school as well as to return home safely and comfortably at the end of the school day. Within the equipment and facility limitations, the real service delivery is provided by the students themselves during transit.

Sensitive, caring drivers should provide only minimal assistance to their passengers to help them obtain maximum mobility and accessibility to the school environment and to perform to the best of their ability in transit. Help when not needed by the students in transit is not help at all, but another barrier for them to overcome. Overhelpfulness by the driver or others must be avoided when students are able to provide for their own boarding and other events. Driver knowledge of passenger characteristics for each passenger is required. The tranportation officer, special educators and parents should share with the driver to meet the real transportations needs of handicapped students.

The driver is the primary adaptive transportation service provider in addition to students themselves. The driver must be trained and fully informed to understand the individual adaptations passengers require during transit. He must meet those needs along with the passengers' own effort to assist themselves. If the passengers fail to meet their transportation needs from their own resources, the driver must provide those services with or without appropriate equipment.

The primary source of equipment adaptations to be made by the passengers and the driver on the regularly equipped bus is making provision for the passengers' personal adaptive equipment. Such equipment may include: crutches, canes, walkers, braces, artificial limbs, special shoes, hearing aids, long canes, head gear and other individual equipment carried onto the school bus. Wheelchairs are personal adaptive transportation devices which require specially equipped vehicles and should not be transported on regularly equipped vehicles.

A crutch is an item of personal passenger equipment that consists of a staff with a crosspiece at the top to support the student in walking. The point of support may be under the shoulder, upper arm, or forearm. For each crutch, a second support is provided at hand level. A cane or walking stick is a shortstaff either straight or curved at the upper end, used to provide some support at hand level in walking. A walker is a four-legged stand which provides support for the user. It is moved either by lifting or by wheeling on casters. A brace is any kind of supportive device for the arms, hands, legs, feet, back, neck or head, exclusive of temporary casts, slings, bandages, trusses, belts, or crutches. Artificial limbs are devices replacing a missing leg, arm, hand or foot. They do not necessarily have moving parts. A device employed only for lengthening a leg where the whole leg or foot is present is not included. Special shoes are footwear designed to assist students in walking and are a part of the personal equipment frequently used by passengers. Long canes are white, reflective canes used by some visually impaired or blind student passengers for mobility purposes.

Specially equipped school buses have any or all of the following equipment provided:

1. Special service door,
2. Power lift,
3. Stanchions,
4. Fastening devices for wheelchairs,
5. Wider aisles,
6. Special seats,
7. Seat belts or harnesses,
8. Storage provisions for personal passenger equipment.

The special service door on the right side of the door is usually associated with a power lift. A walkup ramp is generally not recommended for mobility-limited passengers. Use of a power lift in most cases is preferred. Use of steps with hands-on assistance provided by the driver is more appropriate than use of walkup ramps. Special service doors require careful parking, consideration of curb height and safety factors for nearby passengers when opening or closing service doors. Two-panel doors are dangerous during gusty wind conditions or in spaces where snow or other objects limit their being fully opened and secured. Door securing devices outside the bus become progressively less reliable and more apt to shut or swing at inappropriate times. Drivers must lean out over the power lift ramp to secure the doors from inside the vehicle, or must secure the doors from the outside leaving the passengers temporarily unsupervised. Aides used during loading and unloading are recommended with special service doors and power lift equipment. While one person remains inside the vehicle to secure or move passengers to and from the loading area and power lift, the aide may assist outside the bus with service doors and passenger assistance.

Power lifts come in several designs and are made by a number of manufacturers. The essential requirement of the power lift is that it be amply large for the wheelchair passenger and capable of handling an adult person safely and efficiently. The ramp in movement must be level or placed slightly upward to avoid forward rolling of the wheelchair during lifting. The lift must permit the driver on board to maintain hand contact with the wheelchair at all times during operation. Another person must maintain hand contact of the wheelchair while outside the bus. Sudden jerky movements, lack of reliable performance of the power lift, constant leakage of the hydraulic fluid system under normal wear and use, slow movement of the lift in cold weather and general equipment failure are notable problems with power lifts. Many power lifts prohibit the driver from changing ramp position while the lift is midway. It is advisable to have the driver accompany the wheelchair passenger on the lift to the ground or into the bus on boarding. Some power lifts are not designed for two-person usage and thus have limited utility or safety. The weight of the power lift equipment when one or two passengers are using it may cause the smaller vehicle to noticeably tip. Power lifts should be sensitive to driver use of controls to accomodate ramp placement flush with the sidewalk or ground. The ramp should remain stable while moving with a standing passenger so as not to disturb the balance of the passenger during loading. The driver accompanying the passenger on the lift must be cautious to make adjustments for headroom when lifting. Pads should be installed on the top lining of the side door for safety. Smaller hydraulic power lifts may not permit the driver or an aide to accompany the passenger on the lift. Such smaller power lifts must insure that at least the passenger has sufficient headroom during operation to avoid additional movement of the passenger head or trunk during loading. The power lift, ramp and loading area must be kept clean and free of obstructions. Greater risk of injury is associated with improper use or malfunctioning of the power lift than with any other adaptive transportation equipment used in transit.

Utmost precaution in appropriate use of the power lift and the utilization of appropriate power lift equipment with desirable characteristics is recommended.

Stanchions, guard rails or guard panels provide limited access to the power lift area by passengers while in the vehicle. A chain may be provided across the lift area when in the down position to prevent boarded passengers from falling into the depression. However, proper use of seatbelts, assigned seating, and supervision during loading/unloading will generally preclude the use of such chains. Guard rails or panels should be well padded by the manufacturer along with other seats and internal equipment on the bus for passenger safety. Standing in the power lift area during transit is not recommended. Sudden, unexpected loss of hydraulic pressure may drop the lift below the normal level of the bus floor or to the ground with resulting injury to the person.

Fastening devices for wheelchairs are generally of two types. Floor mounted designs enable connection of the wheelchair with the floor via braces, straps, or turnbuckles. Wall mounted designs enable wheelchairs to be placed near the wall with expanding brackets to secure both wheels. Floor mounted designs are appropriate for Mullholland-type chairs. Such mounts must be individually adapted to specific passenger equipment characteristics. Size of passenger, height of bottom brace or crossmember of the Mullholland chair and other factors require individual measurement for each passenger. Adjustments must be made for the brace to fit and appropriately secure the chair in place. Floor or wall mount measurements preclude most passengers from other locations than the one measured and adjusted for their personal adaptive equipment.

Problems frequently occur with the use of wall-mounted systems:

1. Wall mounted braces adjust to full locking position only after appropriate measurement of the individual width required between wheelchair wheels;
2. Any inappropriate adjustment of the brace will mean that the wheels are not fully engaged or are overengaged, bending the wheels outward to damage the chair;
3. Spokes of the wheelchair must be aligned so that the brace will not contact spokes, but will contact the wheel rim for appropriate securement;
4. Wall mounted braces must have locking characteristics when fully engaged and in place;

5. While in transit, a malfunctioning brace may come loose and add to the risk of tipping the wheelchair;
6. Wall mounted braces constitute a significant hazard when exposed or not in use with a wheelchair for passengers who might fall against the brace and injure themselves.

A wider aisle is a necessary characteristic for specially equipped vehicles for passengers who require a wider stance when using braces, crutches or walkers, or who are in wheelchairs and must be moved along the aisle to the assigned location. When several wheelchairs are mounted and secured, aisle width is significantly reduced for walking passengers. In many instances, it may not be possible for a wheelchair to pass along the aisle when another wheelchair is in place. Both must be loosened to accommodate to the next wheelchair. Specially equipped buses should have wide aisles for the large space needed for safe movement.

Many specially designed buses are equipped with narrower seats with higher backs, extra padding and seat belts. Significant space differences for footrest space needs exist between passengers who use various types of adaptive equipment carried on board. Crutches, canes, walkers, long canes, and other individual passenger equipment must be safely stored under the seat or beside the passenger and secured by the seat belt. When two passengers with their individual equipment are used per seat, the seating space may not be adequate or the seat belt appropriate in securing the passengers or their gear in the event of sudden stops or other emergency conditions. Seats should be maintained in good condition, not permitting foreign objects or contents of the seat to be removed and placed in the mouth of younger passengers.

Seat belts are recommended for all handicapped student passengers on regularly or specially equipped school vehicles. Seat belts for handicapped passengers should be somewhat longer than usual to accommodate personal equipment, double passengers per seat or other physical adjustments necessary. Seat belts should be secured from the aisles rather than the bus wall. Belts should not be the press button release type. This type permits some passengers to quickly learn to disengage the belts while in transit. Other types of belt buckles are recommended that are heavy duty, will fall on the floor in the aisle when released at any time, and are difficult for immature students to release themselves without assistance. Harnesses used instead of seat belts for some passengers must be individually designed according to specific passenger posture, and securement needs while in transit.

Wider, full trunk harnesses are recommended over any type that would restrict the use of single limbs only. Harnesses which in any way restrict movement of the head or neck are not recommended for their obvious safety risks. Harnesses must not only restrain the passenger during sudden stops or on impact, but must not restrict breathing, circulation or life functions when the vehicle is on its side or turned over.

Personal passenger equipment storage is best done under the passenger seat or secured with the passenger by seat belt. Equipment and passenger in the same seat are appropriate when this does not interfere with the safety or comfort of other passengers. Passengers without personal equipment on board may double up on the remaining or assigned seats.

In considering the many forms of adaptive equipment, both passenger-specific and vehicle-specific, safety and comfort of the passenger is of utmost importance. Personal equipment may include crutches, canes, walkers, braces, artificial limbs, special shoes, hearing aides, long canes and other individual equipment. Vehicular equipment may include adaptations for power lifts, special service doors or harnesses. Many of the above personal equipment items may be used on regularly equipped buses where the driver is willing to make individual accommodations for particular passengers. Wheelchairs require specially equipped vehicles.

Perhaps the most valuable equipment on any school system vehicle in accommodating the needs of handicapped passengers are the passengers themselves. With adaptations passengers make for themselves while in transit, with informed drivers who are willing to accommodate individual needs, most vehicles do not require any particular specialized equipment other than what is brought on board for the students' personal needs. Some few students who experience severelylimited mobility skills or who are confined to wheelchairs require specially equipped vehices. When students make all the accommodations they are able to in order to be successful in transit, then the school system must make up the balance of adjustments required for safe and appropriate individual tramsportation.

GENERAL HANDLING TECHNIQUES FOR HANDICAPPED PASSENGERS

General handling techniques for handicapped students apply to events in transit, in the school setting, and at home. Uniform handling procedures will assure safer transit, with less risk of injury or accident that may be caused by persons other than the students. Procedures applied in all settings by all persons are the best method to assure the best handling of students.

There exists an established technology of lifting, carrying, and transferring students who are handicapped to promote their safety during transportation. Proper procedures for carrying, lifting and transferring must reflect the individual student needs, handicapping conditions, health characteristics, orthopedic aids to be used, and general student preferences for handling.

The process by which handicapped students are seated and secured during transport is an important component of adaptive transportation. Appropriate techniques must be utilized to seat students to assure their safe transport and to accommodate their individual needs and preferences. Securing the passenger is an important component of adaptive transportation. Planning and practicing proper handling techniques is perhaps the most important preparation to reduce risks of injury, accident, and increase student safety. Parents, driver and aide, teacher and teacher aide, school nurse and other school personnel should be supervised and trained by a professionally competent person. Such a person may orient school personnel and parents to general handling techniques. He will formulate the specific handling problems and strategies for individual handicapped students. Such a person would ordinarily be a physician, registered nurse, physical therapist or designated personnel.

Specific student handling techniques must be shared with all who may be called on at any time and under any circumstances to assist in student handling. Practicing such techniques should be done with all personnel under professionally competent supervision to ensure that proper procedures are exercised. School responsibility for proper student handling, development of IEP content for student handling, and supervised handling of students while in transport and at school is part of adaptive transportation services.

A written plan for specific handling must be shared with all personnel and parents who will be responsible for handling students. Written training procedures are also recommended to reasonably assure that all persons who need to know are trained in proper handling procedures.

Organization of activities associated with student handling is required. A decision by responsible adults must be reached each time transfer or handling is to be initiated. The decision must include what the adult is going to do to help the student transfer and what is the easiest and safest method for transferring. Preparation includes having all appropriate student transfer equipment ready. Check in advance of actual use for proper functioning of all equipment to avoid failure and danger to the student when actual transfer is underway. Establish the work area and ensure that no obstacles, dangerous conditions, or known safety risks exist that may impair the transfer process before actual transfer of the student. Tell the student what handling techniques will be done in a manner that is understandable to the student. Some students with multiple handicaps and severe retardation may not understand instructions. Non-verbal touching in a familiar way may inform the student that a frequent and familiar handling process is about to be done. Talk with the student to have the student assist in the transfer as much as he is able. Explain to the student exactly how he may assist in the transfer and expect him to help if he understands. When others are participants in the transfer, a single adult must take responsibility to co-ordinate all others in the transfer activity. Each adult must know the role expected to be performed by himself and others during the transfer. All transfer activities must be logically reversed to the original situation of the student at the end of the school day, period or activity or the return home. Movement of the student by transfer from one situation to another that cannot be reversed back to the original situation is not advisable. Planning for transfers must include reverse transfers for students to return them to their home situation properly.

Attention during transfer should be on positioning and holding the student rather than focusing on handling equipment. While equipment must be secured properly in preparation for transfer or moved during transfer, attention should rest on the student movement. Give the student assurance that his safe handling is of the most importance rather than greater care being demonstrated for equipment damage or failure. Make transfers with sufficient personnel as backup to the activity so that equipment to be ordinarily used in transfer can be avoided if necessary. This is particularly important due to unexpected equipment failure. Human handling during transfer is the basis of all transfer planning when equipment fails.

Adults should ensure that body position during lifting, carrying or transferring will not demand that twisting the body of the lifter will be necessary. Secure good footing and a clear path before transfer for all adults, equipment and student movement. Move the student only as fast as the student is ordinarily able to help himself during transfer. Assure maximum student self-help by not rushing during transfer. Much student learning and personal feelings of self-worth are associated with simple mobility tasks which adults may take for granted.

> Proper body mechanics are required during the transfer process by all adults involved. When a student is very large, obese, or unable to maintain torso balance, lifting, carrying or transferring

> the student should not be done without other adults' assistance. Move parts of the large student's body at a time, legs first, then arms and torso as required during transfer. Use of mechanical equipment aids may be required such as bus hydraulic lift, Hoyer lift equipment from bed or chair transfer to wheelchair, group lifting of student using chairs of sufficient strength and size, and other similar equipment. Establish lifting and transfer activities at a comfortable height for adults when transferring. Use legs and hips for lifting rather than arms, shoulders or back for primary weight loading. Keep back straight and bend legs when transferring. If possible, roll, drag, push, or pull rather than lifting the student outright. Use the best leverage provided by trunk or legs when lifting or carrying students. Stand with one foot forward for wider base of support during transfer. Remain as close to the child during transfer as possible. Avoid lifting higher than the waist. Do not lift quickly.[1]

Once proper techniques of transfer are established, planned, practiced routinely, and written in the student IEP, it is important not to vary the techniques as applied. While potentially monotonous for adults, proper transfer techniques assure reasonable safety and efficiency of movement of all concerned and should not be varied. Variations may be required only under special or emergency circumstances or when professional supervision is used during variations or transfer procedures.

Perhaps the most important component of the transfer procedure is the student's ability to help transfer himself. Individual transfer plans should accommodate to two means of transfer: (a) Student maximum effort that can be reasonably expected in typical transfer situations; and (b) Student minimum effort that can be reasonably expected in unusual transfer situations. Different levels of student effort for transfer will require different equipment or resorces as well as handling techniques.

Planning specific transfer techniques requires knowledge of the student's typical efforts to help himself. Situations vary daily, including student abilities, strength, and attitudes toward helping himself. Variations of handling should not be adult-based but student-based in most instances where variations may occur in the student's ability to help himself. Determine how much the student can and will cooperate during transfer on a daily basis. Knowledge of student characteristics and real efforts likely to originate in the student are helpful information in providing transfer assistance. Maximum student participation is a rule of thumb. Minimum adult participation is also a rule of thumb during student transfer.

Activities during student transfer may be distressing to others watching the procedure who do not understand the written transfer plan, the techniques and procedures commonly used per student. It may appear that adults are not being sufficiently helpful or caring for the student. However, fuller understanding of the real student handling and transfer goals must include the very real possibility, almost certainty, that in many daily situations, students will seek to produce minimum effort, complain of not being helped properly, or complain of not being able to perform satisfactorily. It is most therapeutic to demand of students their maximum reasonable effort in certain situations when other student conditions, such as illness, emotional upset or mental anguish are not present. Such demands for maximum student effort may leave some students resistant to providing self-help. Educational efforts during transfer are as valid as learning to read and write for the mobility limited student. Genuine care for student welfare and safety may require responsible adults to expect maximum effort by the student during transfer. Only under special situations or conditions, such as emergency transfer, will the normal expectations for student conduct be waived. The student must help himself to the maximum extent possible during transfer. Adult assistance provides the minimum help to add to the student effort to ensure proper transfer.

The Florida Department of Education Driver Manual offers a comprehensive treatment of carrying, lifting, and transferring handicapped students:

> Falling while carrying. (1) If close to a wall or other stable object, rest weight on it; (2) Be alert to protect the child's head; (3) Fall under or to the side of the child; (4) Turn child away from hard objects; (5) Fall against the bed or other soft object if close; (6) If falling down stairs, try to lower to sitting position on legs; (7) If falling upstairs, turn and sit on the stairs, holding on to the child; (8) After stumbling, crouch and sit down to prevent tumbling.
>
> Lifting heavy child without braces from floor to standing position. (1) Kneel close behind the child and grasp him under his armpits, with the grasp pressure against the trunk; (2) Raise the child to a sitting position; (3) Shift to a stride position with your knees bent and back straight; (4) Still grasping child under armpits, raise him to a standing position by straightening your legs and shifting your weight quickly toward your rear foot.

Assisting child to walk during change of position. If the child is able to support his weight on his legs and is able to take steps but has difficulty in maintaining his balance, assist him as follows: (1) Stand close behind him so that your forward leg is in contact with the child; (2) Grasp his waist or the waistband of his brace with one hand. Place your other hand over his shoulder or under his armpit; (3) As the child moves forward, keep your hand or leg in contact with him; (4) Use your leg to assist the child in moving forward by swinging the leg forward against his buttock in a lifting position.

Assisting child who has lost his balance. If the child starts to fall while walking, step close to him and place your leg next to him for support or to break his fall. If at all possible, grasp his clothing or trunk, and as his body is lowered, shift your weight away from the direction of his fall and draw him against your supporting leg. If the child is falling toward you, crouch and place one leg under him or place your thigh against him while supporting his upper trunk with your hands. *Caution*. The goal should be to prevent injury, not to regain balance. Do not reach outward or lean over to catch him.

Assisting the child to walk downstairs. (1) At the top of the stairs, place the child's hand or both hands on the rail, and while steadying him, move to the step below him and face him; (2) Grasp the child's waist and move to the next lower step. Stay close to the railing. Keep your weight forward. Rest your arm and hip against the rail.

Additional considerations. If the wheelchair's drive wheels are forward, turn the chair so that the handles are toward the school bus and the drive wheels are against the side of the bus. Enter the bus and, with the legs in a stride position, crouch and grasp the handles of the wheelchair. Draw the wheelchair into the bus by shifting the weight to the rear.

Removing the wheelchair from school bus. (1) Align rear of wheelchair with door and move it close to the edge of the school bus; (2) From outside the bus, stand with legs in a stride position; (3) Grasp the handles and tilt the chair backward; (4) Draw the chair to the edge of the bus by shifting the weight to the rear leg. Roll the chair on its large wheels; (5) Crouch and control the descent of the chair by forcing the wheels against the edge of the bus as the chair is lowered.

CARRYING

Principles of good carrying. (1) Avoid carrying whenever possible by using a household chair with wheels added, tricycles, wheelchairs, or hydraulic lifts; (2) When carrying is absolutely necessary, hold the load as close to your chest as possible; (3) Keep a firm grasp. If your grasp becomes loose, rest the child against something while you secure a firmer grasp; (4) Keep your back straight, not arched either forward or backward; (5) Do not twist; turn your whole body. (6) Stand close to the load, with one foot ahead of the other; the foot that is ahead should usually be in the direction you are going; (7) Do not try to lift from a kneeling position, as this takes away the power source. However, with smaller children or loads, it may be advantageous to start to lift with one knee on the floor; (8) Get a good grasp before starting to lift; (9) Make a preliminary lift to see if the student weight is within your capacity; (10) If the weight of the load is more than one-fourth of your body weight or if it is awkward, you should get someone to help you; (11) Lift one end of the load slightly, if necessary, to get a firm grasp; (12) Get your legs ready for the lift by bending them; (13) Lower your body near the level of the object to be lifted; (14) Be sure your back is straight. If it is neither rounded or arched, and is near the vertical position as possible, you will avoid strain; (15) Be sure your hands reach straight downward to the load; (16) To be in a proper position, let your back muscles hold your back steady as your leg muscles tense to go to work; (17) Lift by straightening your legs in a steady motion to a vertical position; (18) Keep the weight of the load close to your body and over your feet; (19) As your legs straighten, keep your back straight; (20) To change direction during a lift, step around and turn your whole body, without twisting at the waist or lower back.

Carrying a child with tight abductors.* (1) Keep your arms close to your body; (2) Rest part of child's weight on your hips and counterbalance his weight by leaning back from slightly flexed knees, without stretching the lower back; (3) Have child lean against you, since he cannot help by holding your shoulder.

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*Tight abductors: ligaments and muscles in the legs which may cause inward rotation of toes and inability to walk on the heels.

> Carrying a child horizontally, if necessary. (1) Hold the child with one of your arms under his knees and the other under his chest, your palms facing upward; (2) Hold the child tightly against your body to relieve arm strain and prevent shifting; (3) Take short steps to maintain balance; do not walk fast; (4) Keep your hips under the load of your upper body and the child; (5) Walk with a large share of the weight over your heels; (6) In carrying a heavy child for short distances, support his weight against your upper thighs. Keep your hips slightly flexed.
>
> Lifting child from wheelchair to standing position. (1) Apply wheelchair brakes. Face the child; (2) Crouch to swing footrests into vertical position, out of the way of the child's feet; (3) Stand in a bent knee position with forward leg between the child's knees and place your hands about the childs chest or under his armpits; (4) Shift your weight backward over the rear foot as you slide the child to the front of the seat; (5) Have the child lean forward and keep his weight over his feet as you draw him up to a standing position. It may help if he holds your hips or shoulders.[2]

The comprehensive and specific lifting and carrying techniques outlined by the Florida Department of Education are consistent with good practice when handling handicapped students. Physical therapists have typically been well trained to demonstrate lifting, carrying and transferring techniques to school personnel and parents of handicapped students. Their services should be called on during the formation of the written transfer plan for each student according to individual transfer or handling requirements as it is incorporated into the student's IEP.

SEATING AND SECURING STUDENTS IN TRANSIT

Seating students appropriately requires a consideration of their individual handicapping conditions, orthopedic aids worn or used for mobility during transit, and their behavioral characteristics. Securing students once seated requires adaptations to individual requirements in preparation for a safe transit.

In general, assigned seats for handicapped students on school vehicles are preferred over student seat selection at the primary level. Junior or senior high students may be able to seat themselves and vary their seating patterns at will without major difficulties. Some students with particular handicapping conditions require routine and uniform seating in the same place during transit. (See Part Two for specific handicapping conditions or orthopedic aids in students and what specific seating requirements may be recommended.)

Securing students once seated requires careful consideration of student orthopedic aid use. Specific orthopedic aids are listed in Part Two under the name of the orthopedic aid and comments are included for student securement.

LOADING AND UNLOADING HANDICAPPED STUDENTS

Loading and unloading at home and at school or the pickup point is an adaptive transportation service. Failure to appropriately load or unload the student when the student cannot board or unload by his own personal resources, strength, skill, or mobility cannot be contemplated by the school system. Parents may or may not be prepared to assist in the procedure. Students may be able to provide assistance for themselves or may not. The school system has full and final responsibility to load the student onto appropriate school buses according to the student's individual adaptive transportation service needs and handicapping condition.

Special handling techniques for loading and unloading are included in each handicapping condition described in individual tables in Part Two of this book. Consideration for individual needs and differences is of paramount importance in providing appropriate transportation. A particular handicapping condition in a student does not assure that any routine or categorical loading or unloading is appropriate. Care should be exercised in determining individual need for adaptive efforts during loading and unloading. General guidelines for service delivery across all categories of handicapping conditions are provided below:

1. Help the student only when specific help is needed;
2. Help the student only as much as the student requires assistance in providing personal effort during loading/unloading;
3. Intervene with student behavior during loading/unloading only when a risk of danger or injury to the student, the driver or other student passengers may occur;
4. Prevent all types of known risks of danger, injury to anyone during loading/unloading by analyzing potentially dangerous activities or events;

5. Plan appropriate student-by-student loading/unloading procedures. Record such activities on student data cards on the vehicle where such information is accessible to all who need to know,
6. Load and unload consistently using the same timeproven and safe procedures without variance.
7. Utilize adaptive equipment for loading/unloading as little as possible for each student. The risk of injury or danger is greater with adaptive equipment than with driver or student intervention and assistance. Equipment may fail at critical times. Personal assistance may fail much less often;
8. Develop alternative plans for loading and unloading students according to their specific handicapping conditions or physical requirements when adaptive equipment is required; Repair or replacement of adaptive loading equipment, especially hydraulic lifts of many types, requires almost constant maintenance and preparations for frequent breakdown. Avoid dangerous situations by planning ahead for such breakdowns of adaptive equipment and determine safe methods by which driver, aide and student may load and unload without equipment;
9. Secure maximum student assistance to load/unload himself whenever possible and safe. With many handicapping conditions in students, ability to help oneself may vary from day to day. Securing student assistance from personal resources may be combined with driver or aide helping students only as much as the student requires assistance to provide the best combination of services per student during loading/unloading;
10. Secure other student assistance for unloading only during emergency evacuation;
11. Use little driver hands-on intervention with the student if the student cooperation and effort is present during loading/unloading while maintaining safety and avoiding unnecessary risk;
12. Demand that all school personnel comply with established individual loading/unloading procedures to assure a safe transit during all phases of transportation;
13. Expect parents to receive help from the school system with loading/unloading of their child during all phases of transportation. It is not reasonable to have parents required to load/unload students when they may not be

consistently available to do so. The driver must have plans for loading and unloading handicapped student passengers at all points of the day and assume no help by parents;

14. Under emergency situations the driver and aide should have equal authority and responsibility to appropriately unload students without the other's assistance, without any student assistance and assuming non-functioning lift equipment. Passersby, emergency teams, or police must cooperate with driver instructions for unloading. Full aide knowledge is required of all loading/unloading procedures for all students on the bus for emergency preparedness;
15. Integrate loading/unloading procedures found to be effective and safe with all other student handling procedures including lifting, carrying, transferring the student from one mode of transportation to another, changing orthopedic aids used, and general transfer from one activity site to another.

SUMMARY

In transit, lifting, carrying, loading, unloading and general handling of students who are handicapped requires careful advanced planning among the personnel who are responsible for student handling. Persons to be included in the planning process and practice of proper technique are parents, teachers, teacher-aides, school nurses, school transportation personnel and others likely to be called on to assist students in transit. The contents of the handling plan should be incorporated into the student's IEP for designating specific precautions or recommended handling procedures consistent with individual student need. Positive learning by the student to provide a maximum amount of personal effort in helping himself during mobility problems while in transit and at the school is the best practice. Uniform handling procedures will assure safer transit with less risk of injury or accident for each handicapped passenger who requires adaptive transportation services from the school system.

EMERGENCY PROCEDURES

INTRODUCTION

The author was witness to the aftermath of the then worst school bus/train accident recorded in the United States in 1963 in Weld County, Colorado. While school bus/train collisions are by no means the only emergency procedures facing drivers of regular and handicapped students, they are perhaps one of the worst. Twenty-two children died either instantly or within a few hours of this tragedy. The author, while an undergraduate student at a nearby university, was one of the first school bus aides to be hired by the local school district to assist the driver. It was the author's ironic privilege to work on the same bus route as the tragedy and to view outside the bus each morning and afternoon the same railroad tracks that caused the mishap. The road was completely redesigned and rebuilt to avoid angular approach by a vehicle toward the tracks and has now been used for nearly 17 years without incident. It is to the 22 school children who perished under unusually difficult and dangerous driving circumstances one cold winter morning, that this chapter is dedicated. Handling driving or student passenger emergencies for students without physical, mental, or emotional handicapping conditions is far from routine, simple or easily learned. Handling handicapped students with their individual and/or group handling characteristics is much more complex in situations not associated with emergencies.

In emergencies, handling of handicapped students safely and appropriately is a challenge. Perhaps the simplest of considerations may assist the reader with this difficult area:

1. Is the situation to be planned for an emergency?
2. Is the situation, though unplanned, an emergency with life threatening, injury producing potential?
3. Can the emergency situation be foreseen, planned for, understood to potentially exist anywhere along the typical route of each special education bus or regular bus carrying handicapped passengers?
4. Can the emergency situation potentially existing be avoided by advance changes in route, procedure or student handling?
5. Are all safety procedures for regular buses and passengers being fully implemented by the driver of the handicapped?

6. Are emergency data cards for each handicapped student fully updated, accurate and related to likely informational needs in emergency situations?
7. Is such student emergency data accessible to persons other than the driver or aide (who may be unconscious) and obvious to others in emergency situations?
8. Are photographs attached to a seat chart located inside the bus with names related to photographs?
9. Does the emergency data card include separate student photographs?
10. Does the emergency data card show specific and individual student handling prohibitions that interfere with typical emergency first aid handling by others on the scene?
11. Are all drivers and aides working with handicapped pupil passengers trained in basic first aid?
12. Are all drivers and aides working with handicapped pupil passengers familiar with the individual passengers, their individual handling requirements, and precautions?
13. Are all drivers and aides familiar with proper emergency handling techniques for a variety of handicapping conditions among their passengers including:
    a. Passengers in wheelchairs, manual or electric?
    b. Braced, crutched or tractioned passengers?
    c. Epileptic passengers?
    d. Passengers with Legg-Perthe's hip-condition, Brittle Bone Disease and other injury-sensitive conditions requiring special handling in normal and/or emergency situations?
    e. Passengers with severe reactions/allergies to typical emergency medications, procedures?
    f. Passengers who are likely not to act in their own best interests for safety or injury-reducing demand situations?
    g. Passengers who are likely to injure others or be severely uncooperative during emergency handling or extrication situations?
    h. Passengers with heart conditions, respiratory distress, stress-induced asthmatic attacks, and other life-threatening conditions identified by emergency data card to outside emergency personnel?

    i. Passengers who are likely to wander off the scene, become lost, injure themselves or wander into traffic hazards?

14. Is emergency situation sufficient to warrant actual evacuation of handicapped students and driver?
15. What students are at risk of injury during evacuation drills to warrant their exclusion from such drills?
16. What students are able to proceed safely without risk of injury during evacuation drills?
17. What specific evacuation procedures are passenger-specific?
18. Are passenger-specific evacuation procedures clearly indicated on emergency student data cards?
19. Are passenger-specific evacuation procedures clearly indicated on emergency seating charts beside each individual picture?
20. Are overall emergency procedures for all students in the school system similar in nature to those planned for handicapped students?
21. What post-emergency procedures are developed on an individual student passenger basis?
22. What route variations are allowed to permit access to emergency services of hospital, fire station, ambulance service?
23. What specific information requirements exist to notify parents, school authorities and others for emergency notification of individual passengers?
24. What training procedures are there for drivers and aides for handicapped passengers and special vehicles that are student passenger-specific?
25. What history of the school system or statewide emergency situation experiences may be integrated into the driver training program for adaptive transportation?
26. Are alternative evacuation procedures planned for in driver training to accommodate:
    a. Rear door exit only?
    b. Front door exit only?
    c. Side window exit only?
    d. Side door exit only (without hydraulic lift operable)?
    e. Side door exit only (with hydraulic lift operable)?
    f. Emergency evacuation through body opening made by other emergency personnel to extricate passengers?

27. Are drivers fully advised as to:
    a. Liability of their behaviors in emergencies?
    b. Insurance coverages for their behaviors?
    c. Authority of driver with others at the accident scene?

28. Are drivers apprised of proper crowd control and helper coordination during emergency evacuation procedures?

29. Are drivers apprised of the responsibility and duty of others, including:
    a. Police officers?
    b. Fire fighters?
    c. Bystanders?
    d. Other student passengers?
    e. Bus aide in the absence of driver?
    f. Driver in the absence of aide?

30. When and under what circumstances may equipment on the vehicle cause emergency situations?

31. How can such equipment be best managed to prevent or reduce the risk of emergency situations?

32. Are parental requisites for student handling honored in the emergency plans?

33. Are emergency handling plans that are student-specific integrated into the handicapped student's Individual Education Program (IEP) description?

34. Are others in the school system fully apprised of the emergency handling procedures in addition to the driver, including:
    a. School principal?
    b. Special education teacher?
    c. Janitor, maintenance personnel?
    d. Parents of each handicapped student?
    e. Local police?
    f. Local fire personnel?
    g. Local state highway patrol personnel?
    h. Ambulance companies or service personnel of the area?
    i. Field trip or activity trip site personnel?
    j. Other personnel likely to be faced with the student emergency situation?

35. Do drivers and others comply with planned activities, precautions, procedures, handling techniques.

What is an "emergency" in which drivers are responsible for assisting or providing direct intervention on behalf of their handicapped students? To what other persons are drivers responsible to lend assistance during an emergency to meet their responsibilities to their handicapped passengers? These and other questions must be thought out prior to actual emergency situations. When planning and training is initiated by the school system for drivers of the handicapped passengers, many situations that could arise in real life may be dealt with competently, smoothly and with minimum risk of injury. Moreover, real emergency situations that were averted or that did occur are perhaps the best object lessons available. Such situations, though potentially embarrassing to the school systems involved, are the best learning experience for others who could face the same emergencies.

An emergency situation must exist before it can be responded to in an appropriate manner. However, situations which are not planned for do occur which may or may not be emergencies. Drivers familiar with their own handicapped passengers may have a different perspective on passengers who undergo grand mal seizures occasionally from drivers not familiar with epileptic passengers. A new driver may panic with the onset of a passenger seizure. An experienced driver will have learned what is appropriate for the passenger known to have epilepsy and act accordingly. Drivers with aides may not have to stop the bus during passenger seizure activity. Some students have repeated and mild seizures throughout their school day as normal events. Others have the rare grand mal seizure that may be life threatening. Most grand mal and other seizures are not life threatening. Only when the airway has been blocked by an ongoing condition, or when status epilepticus occurs (repeated grand mal seizures one after another following at close intervals) is there likely to be a real emergency with life threatening or injury producing potential.

What one driver may determine to be an emergency situation may not be an emergency in the judgement of other drivers. Guidelines must be constructed by the school system based on their own drivers and their own experiences for identifying specific students or situations that warrant full emergency treatment. Consideration of individual student status during likely emergency situations is appropriate when transporting handicapped students. Planning may be cumbersome and inappropriate when transporting non-handicapped students. Individual planning for handicapped students is part of the special education program to be provided by the school system according to law, including provisions for adaptive transportation.

Where potential emergency situations exist along the bus route, during student handling, and at any point during transportation, planning for appropriate driver responses to such situations must be done. Ignoring potential dangers is not equivalent to reducing the likelihood of their occurrence during any school year. Planning for emergency situations will assist in appropriate emergency handling procedures whenever possible. The potential for equipment failure, misuse of equipment and subsequent injury to passenger and driver is greater with the handicapped than for regular buses and non-handicapped student passengers. Planning for emergency situations is the best practice in determining adaptive student transportation.

Best practice with non-handicapped is likely to be best practice with handicapped passengers. Only in a few specific situations known in advance will handling and procedures be different for specific handicapped passengers. Best practice in regular transportation is generally best practice in adaptive transportation. Compromise of safety by the drivers on adaptive routes, vehicles or with handicapped students cannot be tolerated.

Emergency data cards for student passengers are nowhere more important than in adaptive vehicles. This does not include all handicapped students. Only handicapped students who require specially trained drivers or aides, special vehicular equipment or who have particularly dangerous medical conditions and are being transported on regular buses should have emergency data cards. Such data cards are the property of the school system and are therefore to be handled as any other confidential student information under the Family Rights and Privacy Act of 1974.[3] This act assures privacy and confidentiality of all written information concerning all students, whether handicapped or not. The emergency data card must be available only to those persons directly associated with the school system, with the parents of the student passenger and other persons on a need-to-know basis. The need to know is clearly implied and assumed with emergency situations. Personnel who attempt to help in such situations as bystanders, whether authorized by law or not have the need to know. Emergency data cards must be complete, current, accurate and fully descriptive to others, particularly to drivers. Such information should not be couched in medically sophisticated terms that may not help those who need to know in an emergency situation. Medications of all types taken by the student are important information to be included on the student's card. Medication reactions, allergy producing medications, treatment and special student handling requirements should be included. Care should be exercised to include all necessary data for each student.

Accessibility of emergency student data cards and of seating charts easily seen (in line of sight at the front entrance of the vehicle) by emergency personnel is the standard by which all emergency data should be evaluated. Data cards containing complete information for students, but not read by those who need to know in emergency situations, could be fatal to the passenger. Seating charts showing individual handicapped pupils imply the use of assigned seats on the vehicle. Placing the data in a readily accessible form and location, including individual student pictures on each emergency data card and individual pictures of seating charts showing where students are located is best. Not all handicapped students require such precautions. Only those students who are transported on specially equipped buses require such precautions. Students transported with their non-handicapped peers do not ordinarily require this level of emergency preparation.

Driver and/or aide training in basic first aid is an important minimum for working effectively with handicapped passengers. Too many minor and a few major medical situations which may lead to medical emergencies are likely to occur during any one school year with handicapped students. With seriously or multiply handicapped students with known medical problems and who are at high risk of medical emergency, at least one emergency situation requiring appropriate basic first aid procedures is a certainty during any one school year. Basic first aid does not authorize drivers or aides to pursue extraordinary efforts during a genuine medical emergency for their passengers. Basic first aid should be practiced as taught, without variance and without more sophisticated techniques attempted. Cardio-Pulmonary Resuscitation (CPR) should never be attempted unless learned in the first aid course in an appropriate manner with supervised and experienced instructors. When extraordinary emergency paramedic techniques are used by drivers with only basic first aid certification, the potential is considerable for negligence, liability and suit if additional injury can be documented for the person being aided. The risks are too great for the driver and aide to go beyond first aid procedures. Providing needy passengers in genuine medical emergencies with appropriate paramedical treatment must be done only when the drivers secure the services of the trained paramedic as quickly as possible. Such personnel are accessible under ordinary circumstances more quickly by the driver on the bus, or by a bystander in a personal vehicle with the driver or aide in attendance to the fire station, ambulance or hospital location. Life threatening emergencies warrant extraordinary efforts by the driver to secure appropriate paramedic treatment when it appears to be necessary for the passenger. To secure such assistance, in no circumstancies should the other passengers be subjected to danger or additional injury during transit to the paramedic site. The remaining passengers must be supervised by the aide away from the roadside and out of danger until help arrives.

Without the presence in any of the passengers of life threatening emergency situations, it is advisable for the driver to remain on the bus or to evacuate if necessary, and give first aid to the passengers while getting a message to the authorities via bystanders, or the aide going for telephoned contact with the authorities. The aide or bystander should be instructed to return to the accident scene and report additional information to the driver at the scene.

Familiarity with individual passenger characteristics may be an invaluable assist during an emergency situation. The difference between injuries associated with improper handling of passengers after an accident and no additional injuries due to handling is an important one. Where the accident produces its own injuries in the passengers, additional injury due to lack of familiarity by the driver and aides of individual passenger characteristic is not acceptable. Further, driver and aide must take command of the situation with bystanders. Most accident scenes become quickly crowded with bystanders. Each bystander is a potential help or hindrance to appropriate accident scene management. Where students are evacuated from the bus, driver or aide should place an individual bystander in charge of an individual student passenger in moving away from the accident scene to a safe place. Supervision of the passenger by a bystander may be erratic, but generally it will be thoughtfully, carefully and willingly done by the bystander. Crowd management may be an unwanted yet thoroughly necessary addition to the responsibilities of the driver at the accident scene. Yet, with proper crowd management, bystanders may materially assist with the safety and care of student passengers who are handicapped. Minimal information should be provided to each bystander about the student in question, precautions noted and assurance obtained from the bystander by the driver that the bystander will take responsibility until emergency help arrives and the student can be placed into the hands of police or other authorities. Often the police will utilize bystanders for direct individual student passenger assistance until their help is no longer necessary.

Prevention of potential emergency situations along bus routes and with particular student passengers is a necessary component of the planning process. While all emergency situations cannot be effectively anticipated, planned for and dealt with when they do occur, prevention will minimize such instances. Prevention requires identification of potential dangers, risk factors with the bus route, the method of loading or unloading, lifting or general handling techniques per handicapped passenger, school site and building characteristics and individual passenger characteristics. Prevention requires that steps be taken to intervene in potentially high risk situations. Such steps may include:

1. Removal of specific students from the route when clear evidence points to dangerous situations that should not be tolerated on the route. Danger must be defined in terms of harm to the student in question, harm to other students or harm to the driver.
2. Provision of alternative transportation (parents or private contractors) to provide adaptive transportation to such seriously high risk students.
3. Removal of specific equipment, passenger equipment or vehicular hazards as they are known. It is better to purchase a new bus appropriately equipped than to utilize an inappropriately equipped vehicle or inappropriate passenger equipment used in transport and subsequently face the potential multimillion dollar suit or insurance settlement.
4. Rerouting the bus away from high risk areas, away from railroad tracks, underpasses, overpasses, fourway stop intersections, multiple street intersections, heavily trafficked neighborhoods and other potential high risk factors along the route is necessary. If the choice must be made to avoid picking up an individual student in order to avoid great risk to the other student passengers, the student must logically be provided other means of transportation. While expensive, there is no substitute for safety through prevention and intervention when compared to human lives.

In ~~Part Two~~ of this book are listed many handicapping conditions, childhood diseases leading to handicapping conditions, and orthopedic aids used by handicapped children while in transport. Specific handling recommendations of a general nature that are unique to the particular handicapping conditions in question are included. Driver familiarity with individual handicapping conditions, use of the tables found in Part Two in this book, and evaluation by other professional special educators in the school for specific and individual handling techniques all combine to provide the best prevention and handling system for handicapped students.

One of the most critical questions that bears on an emergency situation during transportation of handicapped students is whether or not to evacuate the bus. Routine evacuation practices required by state laws must be carefully considered for the potential risk of injury during practice evacuations by certain handicapped students. While required by state laws or school policy, a law of more importance is inherent in the Individual Education Program of each handicapped student that may specifically preclude unnecessary practice evacuations. It is in the best interests of some handicapped students not to be evacuated during any practice setting, but only during life threatening situations. Other handicapped passengers are not subject to high risk of injury during practice evacuations and should be required to evacuate as are non-handicapped passengers. The majority of passengers may evacuate without incident during real emergencies or practice evacuation sessions. Where certain students should not evacuate unless under life threatening emergency situations, such conditions should be clearly stated in their Individual Educational Program and incorporated into their transportation service. Drivers of handicapped student passengers should consider what handling should be done post-accident. Such problems may include: wandering from the site, becoming lost, becoming a road hazard or at risk of further traffic injury, quarreling between passengers during emergency evacuation, specific handling characteristics unless properly informed by the driver at the scene.

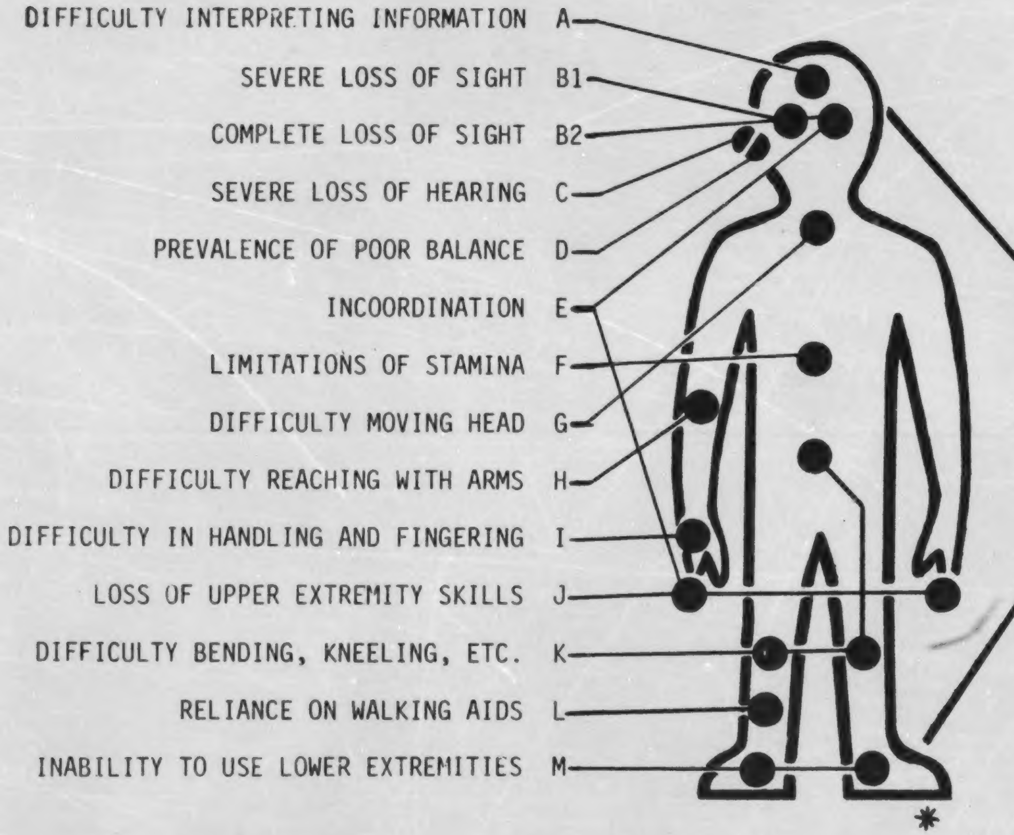
Driver liability, negligent action, duties and responsibilities must be identified by individual school systems. Performance of duty, recognition of and following school policies and procedures by drivers, and demonstration of care and concern for passengers in emergency situations are all part of liability.

Driver familiarity with passenger equipment, vehicle adaptive equipment and proper use and maintenance during normal operations is mandatory. Under emergency situations, such equipment must be used with great care, if at all. Hydraulic lifts, wheelchairs (manual or electric), braces, crutches and other passenger-specific equipment may be left with the vehicle during evacuation. It is better to replace equipment lost during legitimate evacuation procedures than to account for human lives lost.

Appropriate maintenance of passenger equipment, cleaning and simple repairs, and reporting to parents or other school authorities when such repairs are needed are all part of the driver responsibility. Reporting to school vehicle maintenance personnel any malfunctioning equipment is critical for safe performance during normal operation, and more critical for emergency situations when operation may be seriously needed.

SUMMARY

Many variables of the student transportation emergency procedures are unknown to anyone, no matter how carefully they plan, anticipate and prepare. Other variables are likely to be known and anticipated, with equal likelihood that such conditions may be prepared for through planning, training and anticipation. Together, such variables may result in fewer lives being lost, fewer injuries to drivers, passengers and others when school systems effectively integrate emergency procedure planning components into their adaptive student transportation effort.


DIFFICULTY INTERPRETING INFORMATION A
SEVERE LOSS OF SIGHT B1
COMPLETE LOSS OF SIGHT B2
SEVERE LOSS OF HEARING C
PREVALENCE OF POOR BALANCE D
INCOORDINATION E
LIMITATIONS OF STAMINA F
DIFFICULTY MOVING HEAD G
DIFFICULTY REACHING WITH ARMS H
DIFFICULTY IN HANDLING AND FINGERING I
LOSS OF UPPER EXTREMITY SKILLS J
DIFFICULTY BENDING, KNEELING, ETC. K
RELIANCE ON WALKING AIDS L
INABILITY TO USE LOWER EXTREMITIES M
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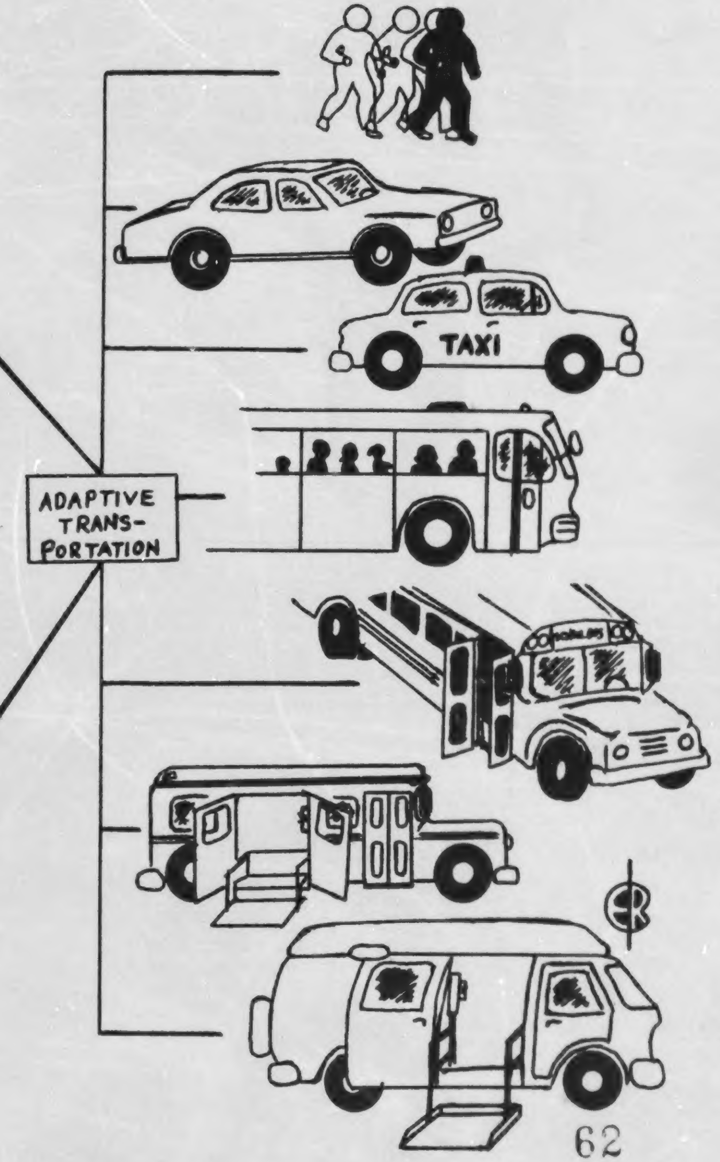
ADAPTIVE TRANS-PORTATION
TAXI

*Adapted from U.S. Dept. H.U.D. G.P.O, 1977, pp.75. ACCESS TO THE BUILT ENVIRONMENT.

PART TWO

ADAPTIVE TRANSPORTATION GUIDELINES

INSTRUCTIONS FOR USING THE TABLES

Analysis of individual students who have limitations during transit and who have certain handicapping conditions requires:

1. Attention to detail and accuracy of information regarding actual passenger performance that is consistent in various transit situations, at home, at school and in the vehicle.
2. Careful observation of the passenger during transit.
3. Sensitivity to the person's willingness and ability to provide any or all adaptive services in transit by his own resources without intervention or help by others.

When the passenger is not willing or able to provide for his own adaptive transportation service needs, intervention is necessary along the guidelines suggested in each of the tables that apply for that particular individual. The tables are entitled Adaptive Transportation Guidelines. The guidelines or tables are arranged alphabetically and include twelve orthopedic aids most commonly used by student passengers in transit and more than 62 handicapping conditions in students. Together, guidelines for many major handicapping conditions in students are provided.

Appropriate and sensitive analysis of individual student adaptive transportation service needs can be generated using the various combinations of guidelines in this section. The whole process is based on careful and accurate observations of failures routinely demonstrated in transit, loading or unloading, moving from home to vehicle and from vehicle to school room. Driver understanding of the orthopedic aids passengers need and use at all phases of the transportation process is required. Finally, the driver must secure accurate information on the passenger handicapping conditions before using the tables. Without accuracy, care in observation, correct information about the passenger, and sensitivity to the passenger's need and ability to provide services for himself in transit, no analysis will be reliable or valid.

ARTHRITIS OF HIP, KNEE OR SPINE: DEGENERATIVE

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Joint deformity of affected part; limited motion/mobility; loss of function due to pain; infection; possible embolism; shortening of limbs, loss of rotation, lateral motion, flexion ability; extension ability loss; (with spinal involvement; loss of motor or sensory skills below the spinal damage location).	Pain relief; Traction; Physical therapy; Medication for embolism, bracing, Prosthesis for mobility accommodation.	Semi-ambulatory or non-ambulatory; Door-to-door transportation required; Use lift; Secure passenger; Aid in movement in vehicle; Accommodate to most comfortable position of passenger possible within safety guidelines.

ARTHRITIS: JUVENILE RHEUMATOID

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Inflammation of joints, tendons, and tendon sheaths; May also be in muscle, joint pains, swelling, stiffness, later muscle weakness, atrophy and joint deformity; Severe weakness and fatigue; Rash, fever; Inflammation of the eyes; Cardiac enlargement.	Rest with supervised exercise and massage; Treatment of local infections; Well-balanced diet; Relief from worry and anxiety; Aspirin, cortisone treatment for pain.	Semi- to non-ambulatory; door-to-door transportation services generally required; Use lift in boarding; Assist in seating in view of most comfortable transit position for passenger; May be in wheelchair or required to use braces or crutches.

ARTHROGRYPOSIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Inwardly rotated shoulders, elbows and knees either fixed in extension or flexion; wrists fixed in a flexed position or turned inward; slender fingers turned into palms; hip in flexion and with outward rotation; feet and ankles turned in and down. Hereditary causes.	Frequent and radical surgery; Casts, splints and braces; Intense and prolonged joint and muscle physical therapy.	Non-ambulatory; Door-to-door transportation required; Frequently confined to wheelchair; Use lift; Assist in seating; Secure in seating; Avoid sudden stops, sharp turns or bumps.

ARTIFICIAL LIMBS (ARMS)

CHARACTERISTICS	PROBLEMS IN USE	ADAPTIVE TRANSPORTATION NEEDS
Amputees of the upper limbs are ambulatory, but may have difficulty in holding and manipulation of objects. Students with upper amputations and upper artificial limbs may use limbs with a variety of attached hand components. Most amputations are due to diabetic gangrene, trauma, congenital malformations. Student may experience difficulty in turning handles or in opening doors. Door handle may be too large, door too heavy, or if opening mechanism too complex or difficult to operate. Operating traffic control pedestrian buttons may be difficult.	Upper limb amputees with artificial limbs may experience: a) Maneuverability problems with door or gate handles; b) Spring loaded door or gate handles; c) Gripper handrails; d) general operation problems of vehicles, cars, bicycles and other mechanical devices; Balance may be affected with artificial upper limb use.	Semi-ambulatory status; Regular transportation modes are acceptable; Assistance with handrails used in boarding or egressing may be necessary; Normal bus behavior rules apply; Danger of serious injury to others when student with artificial limbs strikes others in anger or by accident; Seat belts may be secured by driver or aide before departure; Seat selection should be done by driver/aide in view of complications with other passengers sitting beside the passenger with artificial arms; Adjustments for body position and comfort may be necessary in transit; Mobility to service site and with architectural barriers is generally good with exceptions noted in the characteristics section of these guidelines.

ARTIFICIAL LIMBS (LEGS, INCLUDING BRACES)

CHARACTERISTICS	PROBLEMS IN USE	ADAPTIVE TRANSPORTATION NEEDS
Artificial legs or braces are used with students who have nerve disabilities and weakened tibial or anterior muscles which cause dropping of the toe. The leg brace is intended to elevate the toe about 10 degrees by spring action, but may lift less. Students who need this assistance have usually been afflicted by cerebral palsy, ataxia, limb contracture, diabetes, hemiplegia, hydrocephalus, incoordination, meningitis, monoplegia, multiple sclerosis, paralysis, paraplegia of lower back or spina bifida.	Mobility in the exterior environment may be limited or more difficult because of: a) Rough, uneven pavement or loose rock; b) Projecting or overhanging steps; c) Risers greater than 6 1/4", treads less than 12"; d) Ramps over 1 in 12 (preferably 1 in 20); e) Lack of at least one handrail on steps or ramps; f) Seating less than 17" high, or without backstand arm rests; g) Walks narrower than 4'6" if two people must pass; h) Lack of convenient restrooms; and i) Insufficient lighting.	Semi- to non-ambulatory status; General behavior rules on the bus apply; Mobility to pickup site is limited; Supervision of transit from door-to-door is generally required; Boarding/egressing should be used with hydraulic lift equipment or driver/aide hands-on assistance if vehicle steps are used; Seating selected should be assigned for safety and comfort considerations; Securing seating may be required with driver/aide assistance; Adjustment for body comfort in transit may require driver/aide assistance; Passenger should keep legs under seat and out of aisle to avoid danger to others in transit; Driver/aide assistance is required from door of vehicle into service site in the building.

ASTHMA

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Spells of coughing, heart and respiratory rates increased; difficulty in breathing; restlessness; fatigue, sweating; abdominal pain, possible vomiting; characteristics may be caused by stress or emotionally induced by student in various situations.	Relief of acute symptoms; Vapor inhalants, drug therapy, antihistamines; Desensitization agents; Allergenic substances; Dietary and occupational regulations; Control of infection; Reduce stressful situations; Reduce activity in times of asthmatic status.	Avoid stressful or emotional situations in transit for the ambulatory status asthmatic passenger; Provide excellent ventilation in transit; Transportation with regular students is recommended; Avoid dusty or allergy producing environments in transit where possible; Assist with vapor inhalants when necessary with the passenger; Sitting upright when attack occurs to facilitate easier breathing; Provide a calm environment in transit; Transport asthma-related medications when medically advised; Administer only with medically written directions; Develop advance written plan for such administration; Secure medication in transit and give to responsible adult at destination.

AUDITORY HANDICAP (EXTREME TO PROFOUND - 80 dB LOSS OR MORE)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
May hear some loud sounds, but is aware of vibrations more than tonal pattern; Relies on vision rather than hearing as primary avenue of communication; Speech and language defective and likely to deteriorate further; Speech and language will not develop spontaneously if loss is present before one year of age; Generally unable to use telephone unless special equipment is available; Cannot hear warning signals, shouts, horns; Must be provided visual warning signals in place of auditory signals; Use visual barricades when necessary to prevent danger or risk of injury to passenger.	Will need full-time special program for deaf children with emphasis on all language skills, concept development, lip reading and speech; Program needs specialized supervision and comprehensive supporting services; Continuous appraisal of needs in regard to oral and manual communication; Auditory training on group and individual hearing aids needed; Part-time in regular classes only for carefully selected children.	Door-to-door transportation required due to inability if walking to hear warning signals or to respond appropriately to dangerous situations; Use speech reading and/or manual communication when interacting with passenger; Assure eye contact when giving directions to passenger; Write or point out directions; Escort inexperienced passengers to actual site until routine is established; Provide written rules, warnings, information or demonstrations of what information is needed by the passenger; Provide maps, signs, etc.; Assign seat near driver; No mobility assistance required unless balance has been affected; Require use of hearing aids in transit; Assure that aids are on and working prior to departure.

AUDITORY HANDICAP (SEVERE - 60 to 80 dB LOSS)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
May hear loud voices about one foot from the ear; May be able to identify environmental sounds; Speech and language defective and likely to deteriorate; Speech and language will not develop spontaneously if loss is present before one year of age.	Will need full-time special program for deaf children with emphasis on all language skills, concept development, lip reading and speech; Program needs specialized supervision and comprehensive supporting services; Individual hearing aid by evaluation; Auditory training on individual and group hearing aids is required; Part-time in regular classes only as profitable.	Ambulatory; Door-to-door transportation services due to inability to hear or respond to warning signals, horns, or shouts; Use speech reading or manual communication when interacting with passenger; Assign seat so that driver's lips and face can be readily seen in mirror by passenger; Assure eye contact with passenger when communicating; Write or point out directions; Use written rules, warnings or information or demonstrations of what information is needed by passenger; Provide maps, signs, etc.; Escort the inexperienced passenger to site until familiar; No mobility assistance required unless balance has been affected; Require use of hearing aids while in transit; Assure that hearing aid is working and turned on before departure.

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AUDITORY HANDICAP (MARKED OR MODERATE - 45 to 59 dB LOSS)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Conversation must be loud to be understood; Will have increasing difficulty with school situations requiring participation in group discussions; Is likely to have defective speech; Is likely to be deficient in language usage and comprehension; Will have evidence of limited vocabulary.	Will need resource teacher or special class placement; Special help in language skills, vocabulary development, usage, reading, writing, grammar; Individual hearing aid by evaluation and auditory training; Lip reading instruction; Speech conservation and speech correction; Attention to auditory and visual situations at all times.	Door-to-door transportation required due to inability to hear warning signals when walking or to respond appropriately to dangerous situations; Use speech reading or manual communication when interacting with passenger; Assure eye contact when giving directions; Escort inexperienced passenger to site until routine transfer has been established; Write or point out directions, provide written rules, warnings, information or demonstrations of what information is needed by passenger; Provide maps, signs, etc.; Assign seat near driver; No mobility assistance required unless balance and coordination have been affected; (See Incoordination); Require use of hearing aid in transit; Assure that aids are on and working prior to departure.

AUDITORY HANDICAP (MILD - 30 to 44 dB LOSS)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Understands conversational speech at a distance of 3 to 5 feet and face-to-face; May miss as much as 50% of class or group discussions if voices are faint or not in line of vision; May exhibit limited vocabulary and speech abnormalities.	Child should be referred to special education for educational followup of progress in regular classes; Individual hearing aid by auditory evaluation and appropriate training in its use is required; Favorable seating and possible special class placement; Attention to vocabulary and reading; Development and usage; May need lip reading instruction, speech conservation and speech correction.	Regular bus placement; Seat near the driver; Reduce bus background noise when communicating; Permit passenger to see driver's lips when driver is talking; Permit passenger to turn in seat when listening to others on board; Talk slowly and plainly to passenger without exaggerated enunciation or facial expression; Escort inexperienced student to site until familiar with route; May walk to bus pickup site after parental training has been done to notice warning signals and danger possibilities along walking route; Treat otherwise as any other passenger; Require use of hearing aids in transit; Assure that aids are on and working prior to departure.

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AUDITORY HANDICAP (SLIGHT - 16 to 40 dB LOSS)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
May have difficulty hearing faint or distant speech; Will not usually experience difficulty in school situations.	May benefit from a hearing aid as loss approaches 30 dB; Attention to vocabulary development; May need lip reading instruction and speech correction.	Ambulatory; Regular bus placement; No vehicle adaptive equipment required; Assign seat near driver where passenger may view face of driver during conversations; Reduce background noises during transit while talking with passenger; Allow passenger to turn in seat when listening to others on board; Talk normally without exaggerated facial expressions; Escort inexperienced student to sit until familiar with route; May walk to bus pickup site after parental training to notice warning signals and danger possibilities along walking route; Treat otherwise as any other passenger; Require use of hearing aids while in transit; Assure that aid is working and turned on before departure.

BEHAVIOR DISORDER (CONDUCT DISORDER)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Consistently demonstrates a pattern involving aggressive behavior, both verbal and physical, to others, associated with poor interpersonal relationships with others; Disobedience, disruptiveness, fighting, destructiveness, temper tantrums, irresponsibility, impertinence, jealousy; Shows signs of anger, acts bossy, profane, attention-seeking, boisterous; Assaultive, defies authority, inadequacy and guilt feelings, irritable, quarrelsome.	Requires an intense and prolonged behavior modification program to effect long-term behavioral changes; Situational counseling and guidance as well as intervention when negative behavior is demonstrated; Long term enforcement of reasonable rules and logical consequences applied when rules are broken; Some democratic development of rules and enforcement procedures may be developed under careful adult guidance and supervision; Peers generally should not be permitted to enforce rules as they may become extreme in application or vindictive without regard to violator's need for learning and personal growth; Consistent adult behavior in all situations is recommended to demonstrate to the conduct disordered student.	Ambulatory; Intensive supervision during transit; Assigned seats away from other peers who will disrupt; Clearly defined rules during transit enforced without exception for all passengers on the bus, including the offender; Assign responsibility to individuals, not to entire passenger group; Do not change rules in spite of organized proposals from passengers; Control outbreaks of fighting or coercion between passengers; Submit regular written records of all offenses of specific passengers to the school authority; Work closely with building principal in supervision; Principal may be in the bus without notice occasionally to assist driver; Do not joke with passengers, assume friendships or personal conversations; Be firm, fair and friendly only when good behavior is seen; Otherwise, be firm and businesslike.

BEHAVIOR DISORDER (IMMATURITY)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Pattern of behaviors inappropriate to the chronological age of the child and society's expectations of him; Preoccupation, short attention span, clumsiness, passivity, daydreaming, sluggishness, drowsiness; Prefers younger playmates; Masturbates, giggles, flusters easily, chews objects; Is picked on by others, plays with toys in class; Habitually truant from home, unable to cope with a complex world, incompetent, immature and not accepted by delinquent sub-group, engages in furtive stealing, shoplifting.	Requires clearly enforced and consistently applied rules of behavior, repeated explanations of behaviors expected in all social situations; Clearly tell what behaviors are expected in personal behaviors; Intervene when negative behaviors are demonstrated through logical or natural consequences; Require socialization experiences with others, cooperative play and work with others; Enforce logical rules of relationships or games with the immature without regard to their preference for abiding by rules; May utilize democratically developed rules so long as the person will comply with others; Assure peer association with own age group and not younger persons than child in question; Utilize consistent adult behavior in all situations and expect the child to be consistent and appropriate to his age and role.	Ambulatory; Assign seats with more mature peers; No adaptive equipment required; Regular bus used; Enforce rules of bus; Remove others who may coerce the immature passenger, but allow facing of some stress and responsibility from others in acceptable social situations; Remind passenger of rules and why such behavior is important; Be explicit when telling passenger what behaviors are expected and why, when situation warrants explanations; Do not allow toys or other inappropriate items on the bus or in transit; Observe for damage or loosening of equipment on vehicle; Assign responsibility for this to student.

BEHAVIOR DISORDER (PERSONALITY DISORDER)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates pattern of withdrawal, with general and specific fears; Feelings of inferiority, self-consciousness, social withdrawal, shyness, anxiety, crying, hypersensitivity; Seldom smiles, chews fingernails, depression, chronic sadness; Seclusive, shy, sensitive, worried, timid; Has anxiety over own behavior.	Requires supportive atmosphere on bus; Clarification of real vs. unreal fears; Help with dealing with peers while in transit; Clearly tell what behaviors are expected and why; Expect behaviors to be demonstrated at all times and appropriately; Intervene or ignore when self-depreciating behaviors are demonstrated; Do not permit self-destructive conversations to continue without referral to counseling personnel; Utilize humor about self-behavior when possible, develop understanding of one's own idiosyncracies and when we all may be acting inappropriately; Teach socialization skills in all possible settings.	Ambulatory; No adaptive equipment required; Use regular buses; Assign seats where socialization may occur without manipulation by others; Reduce crying or attention-getting behavior by ignoring or humoring others around passenger who are behaving appropriately; Reinforce all possible self-understanding or self-confidence building behaviors of passenger; Avoid other passengers who may exploit or manipulate child into inappropriate fears or negative, demonstrative behaviors; Be explicit in defining what are appropriate responses of child to all kinds of social situations and learning experiences; Friendliness by the driver is paramount to securing good relationship with passenger who has personality disorder.

BEHAVIOR DISORDER (SOCIALIZED DELINQUENCY)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates a pattern of behavior in response to environmental circumstances; reinforcement by peers and modeling of behavior of adults and peers who do not behave appropriately themselves. Has bad companions, engages in gang activities and cooperative stealing; habitually truant from school; accepted by delinquent sub-groups, stays out late at night; has strong allegiance to selected peers.	Requires an intense and prolonged behavior modification program of child and his reference group for minimal success; May react quite differently to adults in authority without an audience of other group peers; Long term enforcement of reasonable rules consistently enforced for all members of the group is necessary; Potential violence of group or individual members should be supervised in conjunction with legal enforcement authorities, school monitors and bus aides.	Ambulatory; Intensive supervision during transit; No adaptive equipment required; Use regular bus; Assign seats; Enforce without exception all rules; Remove riding privileges when rules are consistently broken; Provide for bus aide at all times; Building principal, police or school monitor may ride without advance notice; Provide secure atmosphere without threats of coercion to other passenger by socialized delinquent passenger; Be firm and businesslike in all dealings; Avoid manipulation through false friendships.

CEREBRAL PALSY (ATAXIA)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates uncoordinated movement, impaired balance, and loss of sense of orientation in space or ability to recognize level of ground during walking; Frequently falls; A disorder of muscle action that is permanent, lifetime; May appear as barely noticeable clumsiness during walking to generalized, severe clumsiness; May occur with other forms of cerebral palsy and with other handicapping conditions such as sensory defects, mental retardation, psychological problems, behavioral disorders and epilepsy; Eyes may be uncoordinated and move in a jerky manner (nystagmus); May demonstrate general lack of stamina, weakness, and become easily fatigued.	Develop as much self-sufficiency as possible; Provide an integrated plan of program goals in conjunction with home, school and bus; Identify specific handling, lifting, movement, transfer recommendations from physical therapist; Identify goals for behavioral growth that driver may support while in transit; Surgery may be required; Physical therapy, speech therapy; Vision training and conservation may be taught; Assure use of glasses, orthopedic aids and other assistance is used at all times; Control for proper nutrition, periods of rest combined with adequately supervised exercise.	Semi- to non-ambulatory; Door-to-door transportation with adaptive equipment required including use of lift; Secure in assigned seat; Use seat belts at all times in transit; Chest belts may be required; Cooperate with the school and home goals that may be reinforced on the bus; Expect appropriate behavior other than uncoordinated movements that passenger cannot help; Talk normally but somewhat more slowly to the passenger; Assure use of glasses, and appropriate use by passenger of orthopedic or other types of aids; Reduce excitement on the bus; Require passenger to reduce activity and noise while in transit; Avoid sudden stops, sharp turns or bumps; Observe specific handling, lifting, transferring techniques given by physical therapist.

CEREBRAL PALSY (ATHETOSIS)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates involuntary contraction of successive muscles, resulting in marked incoordination and almost constant motion of the arms and legs; Startle reflex, writhing, extension and spread of fingers, head drawn back and mouth open, tongue protruding; When under stress, motions may become more severe; Many forms of athetosis result in various parts of body involved and levels of severity; involvement of neck, trunk, arms and legs; Walks in a lurching, writhing manner; Unable to control standing or sitting posture; As efforts increase, grimacing and other uncontrolled movements intensify; May not be obvious during sleep when movement may be fairly regular; Frequently associated with other handicapping conditions, sensory defects or retardation, epilepsy and behavior disorders; May have poor or unintelligible speech, poor emotional control, anxiety, short attention span, poor concentration and distractibility.	Educational efforts should be appropriate to intellectual ability; Develop as much self-sufficiency as possible; Provide integrated goals, behavior management techniques and behavioral standards consistent with home, school and the bus; Identify specific lifting, handling, movement and transfer goals from physical therapist; Surgery may be required; Orthopedic aids may be used along with wheelchair or other devices; Control of proper nutrition, periods of rest combined with adequately supervised exercise.	Semi- to non-ambulatory; Door-to-door transportation services using lifts and other appropriate adaptive equipment; Secure in seat; Use seat belt, shoulder or chest straps as appropriate; Cooperate with home and school goals, behaviors to be reinforced, behavioral standards to be maintained; Talk normally, according to maturity demonstrated by passenger; Avoid sudden stops, bumps, turning sharp corners; Avoid sudden, loud, sharp noises; Reduce noise and other stimuli on bus when possible; Passenger to reduce movement and excitement on the bus; Assure use of appropriate orthopedic aids and/or glasses where indicated; Use pillows, blocks or other aids in positioning passenger; Maintain good body alignment in transit; Change positions frequently to avoid sores.

CEREBRAL PALSY (RIGIDITY)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates widespread, continuous muscle tension or "leadpipe" stiffness in limbs; A severe form of spasticity; Lack of voluntary motion ability; Tremor form may be characterized by involuntary body vibrations, shaking or trembling of the affected limb(s); Demonstrates somewhat more ability to control movements than other forms of cerebral palsy; Tremor is usually limited to specific muscle groups of the body rather than generalized; May occur with other forms of cerebral palsy as well as be associated with other handicapping conditions including sensory limitations, retardation, epilepsy and behavioral disorders.	Develop as much self-sufficiency as possible; Provide an integrated plan of program goals in conjunction with home, school and bus; Identify specific handling, lifting, transferring techniques as well as behavioral standards that are consistent in all settings when supervised by adults; Surgery may be required; Physical therapy, relaxation techniques may be utilized; Assure use of glasses and other orthopedic aids when appropriate; Control for proper nutrition, rest and exercise.	Semi- to non-ambulatory; Door-to-door transportation with adaptive equipment including lift use; Secure in assigned seat and use seat belt, chest or shoulder harnesses as appropriate; Reinforce behavioral standards of school and home while on the bus; Expect appropriate behavior in uninvolved areas of skill by the passenger; Talk normally geared to the maturity of the passenger; Assure use of orthopedic aids; Reduce excitement on the bus; Reduce noise; Avoid sudden stops, turns or bumps; Observe specific handling techniques prescribed by physical therapist.

CEREBRAL PALSY (SPASTICITY)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates muscular tension when movements are attempted and when not attempted; Movement is voluntary but slow, explosive and usually poorly initiated; Different groups of muscles may be involved; May have "scissoring" of legs, drawing legs together and rotating of legs at hip to reduce walking ability; May have toe-walking type gait due to inwardly rotating foot and contraction of calf muscles, causing elevation of the foot on the toes; May be associated with other forms of cerebral palsy and other handicapping conditions including sensory loss, retardation, epilepsy, behavior disorders; More voluntary control exists with the spastic than with other forms of cerebral palsy; Most common form of cerebral palsy is spasticity.	Educational efforts should be appropriate to intellectual abilities; Develop as much self-sufficiency as possible; Provide physical therapy, speech therapy, exploration of muscles, strengthening and development of independence; Provide integrated goals, behavioral standards and behavioral control methods between home, school and bus; Surgery may be required; Orthopedic aids may be used along with wheelchair or other devices; Control for proper nutrition, periods of rest and exercise.	Semi- to non-ambulatory; Door-to-door transportation services with lift and other individually appropriate equipment; Secure in seat; Use belts, shoulder or chest harnesses as appropriate; Cooperate with school and home behavioral handling techniques; Coordinate lifting and movement techniques with physical therapist; Provide pillows, blocks or other support aids in transit; Move body frequently during extended transit; Communicate normally, based on maturity level of student; Avoid sudden stops, turns or bumps as well as sudden, loud noises; Reduce excitement level on the bus; Maintain good body alignment in transit.

CLUBFOOT

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
One or both feet turned downward at ankle.	Surgical treatment; Casting and bracing during infancy and early childhood; Use orthopedic devices for mobility.	Semi- to non-ambulatory; If bilateral, door-to-door transportation services may be appropriate; If one foot is involved, accommodation to passenger orthopedic use; Passenger can secure himself, move in vehicle safely; May not require lift if semi-ambulatory.

CONGENITAL DISLOCATION OF THE HIP

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Head of femur, or thigh bone displaced in hip socket.	Cast or brace to hold femur in place until bone and socket grow properly; Surgical removal of femur and replacement with artificial femur/socket assembly.	Semi- to non-ambulatory; Door-to-door services generally required; Accommodate to limited mobility and/or use of braces, crutches or wheelchair; Secure passenger in seat; Use lift in boarding and attendant assistance.

CONGENITAL MALFORMATION OF THE HEART

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Impaired pulmonary blood vessels leading to/from the heart; Impaired valves or walls of heart, resulting in malfunction and progressive damage to heart; Reduced strength, vitality and stamina; possible central nervous system damage; heart murmur, lack of rhythmic heartbeat, reduced healing of wounds; persistent fever; possible heart failure.	Surgical repair of damage; Balanced diet with iron and vitamins; Infection control; Appropriate response to surgical complications and recovery; Reduced activity during recovery.	Semi- to non-ambulatory; Door-to-door services required; Accommodate to wheelchair or physical assist in boarding and while in transit; Use lifts, secure passenger in seat; Reduce activity and provide a calm transit environment; Plan for emergency transit if heart fails.

CRUTCHES

CHARACTERISTICS	PROBLEMS IN USE	ADAPTIVE TRANSPORTATION NEEDS
Average adolescent male has a crutch swing in use of 4 feet, shoulder height of crutch contact of 4'8", a standing crutch span of 3 feet, and a walking crutch swing of 3'6"; Students using crutches may have varying degrees of amputation of lower limbs, arthritis, cerebral palsy-athetosis, congenital heart defect, club foot, contracture of limb or joint, diabetes, hemiplegia, incoordination, meningitis, monoplegia, multiple sclerosis, muscular dystrophy, osteoarthritis, osteomyelitis, paraplegia (one or two limbs), poliomyelitis, prosthesis, rheumatism, and other conditions; The use of crutches provides more stability than the use of a cane if one needs to freely swing a leg through in the process of ambulation; Crutches are also used during healing of broken limbs.	Students using crutches may require railings or other forms of assistance in moving up or down grades, require ample space in moving down aisles, up long flights of steps; Parking spaces between vehicles must have ample room for students with crutches to pass; Mobility may be limited or made difficult due to: a) Rough, uneven pavement or loose rock; b) Projecting or overhanging steps; c) Risers greater than 6 1/4", tread less than 12"; d) Ramps over 1 in 12 (preferably 1 in 20); e) Lack of at least one handrail on steps or ramps; f) Seating less than 17" high, or without backstand arm rests; g) Walks narrower than 4'6" if two people must pass; h) Lack of convenient restrooms; i) Insufficient lighting.	Hydraulic lifts required for the semi-ambulatory student using crutches; Selected seating to assure adequate leg room and prevent blocking aisles; Secure crutches in safe place to avoid danger during emergency stops; Normal bus rules apply; Preparing for travel may be difficult as well as reaching the pickup site; Care in use of seat belts must be taken to accommodate for body casts, etc.; Preparation for egress should be supervised and assisted; Use egress and boarding procedures as individually appropriate; Assist with site and architectural mobility limitations on an individual passenger basis as needed.

CYSTIC FIBROSIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Impaired digestion and absorption, chronic pulmonary disease; respiratory tract allergies; recurrent, excessive coughing; heat prostration; excessive sweating; usually progressive deterioration; Appears undernourished; Poor sleep habits; constant bronchial infections; shortness of breath.	Respiratory assistance, oxygen, aerosol solutions; Antibiotic therapy; High calorie diet; Physical therapy to promote bronchial drainage; Educational placement in class for physically handicapped or homebound instruction.	Ambulatory to semi-ambulatory; Door-to-door services required; Aide to help in seating, securing belt, etc., as individually required.

DIABETES

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Loss of weight, increased appetite, excessive thirst, listlessness, lack of vitality, irritability, inattention; Complicating factors such as impaired vision, skin lesions, paralysis and heart conditions; If chronic, may lead to blindness, amputations, acute or progressive renal (kidney) failure and septicemia (generalized infection).	Balanced regime of diet, exercise and insulin treatment; Infection control; Fluid intake to avoid dehydration; Counseling for adjustment problems or lack of self-control, inculcate responsible discipline for diet or medication regime.	Ambulatory; Regular bus rules apply; May gather with other students at common neighborhood pickup site; First aid procedures apply when insulin shock symptoms are demonstrated by student in transit; Have medication, water and/or special foods available in transit only with doctor's prescription and written recommendation if needed; Advise parents or school on arrival if student has demonstrated symptoms of insulin shock in transit.

EPILEPTIC SEIZURES (AKINETIC OR MYCLONIC)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates a sudden, generalized jerk or loss of muscle tone without detectable loss of consciousness; Seldom controlled by medication; May occur quickly from 5 to 300 times daily; In infants, may be characterized by drying, colic, poor eating habits, staring, muscle jerks or twitching and slow motor development; Person may suddenly draw self up into a ball or have legs and arms jerk into the air; After convulsion, loss of energy and interest in surroundings; May cause sudden falling to the ground, resulting in frequent bumps, bruises or cuts; May be associated with other handicapping conditions, including sensory problems, retardation, cerebral palsy; Seizure may move into grand mal type seizure.	When seizures affect learning, special education may be considered, particularly when other handicapping conditions exist in the child; Seldom responsive to medication control of seizure activity; React as normal student other than when in seizure state; Respond to seizure activity based on individual need for assistance, supervision during seizure; Resume normal activities when seizure is over unless a period of rest is required during recovery or confusion is obvious after the seizure.	Ambulatory; When seizure occurs, non-ambulatory; Door-to-door transportation services to provide supervision when seizures may occur in transit or during boarding; Use regular first aid procedures for seizures when they occur; Aide should utilize first aid, allowing driver to continue transit; If repeated seizures occur of minor nature, report to school authorities; Permit student to rest after seizure is over; Adaptive equipment for boarding is not usually required unless associated handicapping conditions are noted in the student; Normal interactions and behavioral rules apply, except when child is having seizure or recovering from it.

EPILEPTIC SEIZURES (AUTONOMIC)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates repeated symptoms of headache, stomach ache, nausea, vomiting or fever; A partial seizure occurring locally in the body without loss of consciousness; May experience temporary diarrhea or loss of bowel control or irregular breathing associated with discomforts described above; May be associated with other forms of epilepsy and other handicapping conditions including sensory problems, retardation, behavior disorders and cerebral palsy; May generalize into grand mal seizure.	Well controlled under medication supervised by physician; Unless associated with learning problems, regular class placement may occur; Treat for symptoms with school nurse or regular first aid procedures if possible in the situation; Resume normal activities when seizure is over unless a period of rest is required.	Ambulatory; When in seizure, semi-ambulatory; Door-to-door services required to provide continuous supervision when seizures occur in boarding and transit; Use regular first aid procedures for particular symptoms; Aide must be present during transit to help while driver continues to or from school; When repeated seizures occur, inform parents or school; Adaptive equipment not usually needed unless associated with the passenger's other possible handicapping conditions; Normal rules and behavior apply, except during seizure.

EPILEPTIC SEIZURES (GRAND MAL)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates generalized convulsions, blackouts, violent shaking of the entire body; Irregular breathing, drooling, discoloration, possible interference with airway; May be preceded by variety of symptoms, including a tingling sensation or a particular sound or smell; Possible injury with falling to the ground may occur; May last a few minutes or may be repeated with serious or fatal complications (status epilepticus); After attack, student is exhausted, disoriented, confused, upset, and may complain of headache; No memory of seizure is often noted in the victim; May resume normal activities during a short seizure without recognition of the event if other symptoms do not exist such as injury.	Fairly well controlled by medication regimen closely supervised by the physician and parents, who must assure that medications are taken correctly and promptly at regular intervals prescribed; Unless associated with other learning or intellectual problems, normal class placement may occur or placement in class for physically handicapped if seizures are severe or frequent and disruptive to the student's ability to perform in the regular classroom; Treat for associated injuries and symptoms and give first aid when the attack occurs; Resume normal activities when seizure is over unless a period of rest is required by some students.	Ambulatory; When in seizure, non-ambulatory; Door-to-door services required to provide continuous supervision when seizures occur in transit and boarding; Use regular first aid procedures during and after seizure until child is recovered and awake; Aide is required in transit, with driver pulling over to assist during seizure; When repeated seizures occur, immediately notify school and parents; Adaptive equipment usually not needed unless passenger has other handicapping conditions; Normal rules and behavior apply to student, except during seizure.

EPILEPTIC SEIZURES (PETIT MAL)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates staring, interruption of normal activities such as speech, reading, writing, may demonstrate wandering eyes or lack of focus; Short interval loss of consciousness without falling or other noticeable symptoms; Does not remember the incident; Usually there are no other symptoms after the seizure; May demonstrate rapid blinking or twitching movements; May occur many times daily, often lasting less than one minute; Passenger resumes what he was doing before the seizure without realizing that loss of consciousness had occurred; May be associated with other handicapping conditions; Seizure may generalize into grand mal type.	Medication may reduce the frequency or magnitude of seizures or have no effect at all; Supervision of medication is necessary for the young, who may supervise their own intake when older; Unless associated with other learning limitations, the child would ordinarily attend regular classes and perform normally, other than during the seizure activity; Frequently the seizure goes unnoticed by student having the disorder as well as classmates.	Ambulatory; When in seizure, semi-ambulatory; Door-to-door services required only when seizures are frequent, for safety in transit to and from school and home; Otherwise, walking or regular bus transportation is appropriate; No first aid procedures are called for; No equipment for loading is necessary; Ordinarily, rules of passengers should apply to the petit mal epileptic; Normal behavior expectations appropriate to age and level of maturity apply to the student, except during seizure activity; Repeated and frequent seizures or seizures leading into grand mal should be treated accordingly, and reported immediately to school and parents.

EPILEPTIC SEIZURES (PSYCHOMOTOR)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates unusual unconscious activities during seizure including: chewing, lip smacking, staring, headaches, stomach aches, color changes, spots before the eyes, buzzing or ringing in the ears, dizziness or strong emotions up to the level of fear or rage; May exhibit dangerous running behavior, swinging arms or legs wildly without purpose; May remember the incident or not; Night or day walking without purpose may be a symptom as well as picking at or taking off clothing, rubbing hands or legs; Usually last about one minute; May lead into grand mal type seizures; May be associated with other handicapping conditions including sensory problems, retardation, cerebral palsy and other forms of epilepsy.	Medication may reduce seizure activity but may not have appreciable effect; Supervision of medication is necessary until the person becomes old enough to be responsible for self-medication; Unless associated with other handicapping conditions that may limit learning ability or performance, regular class placement and normal behavior is expected other than during seizure activity.	Ambulatory; When in seizure, non-ambulatory; Door-to-door services are frequently best, to assure safe transit to and from school and home; Remove objects during seizure to avoid injury to self or others; Utilize seat belts; No adaptive equipment is ordinarily needed unless the passenger also has other handicaps; First aid for seizures is appropriate; Aide must be on bus with driver; Driver should stop transit during seizure to assist the aide; Repeated and frequent seizures should be reported to school and parents.

GUIDE DOG

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
The seeing eye dog is used for visual mobility for the blind or visually impaired student; Few students use seeing eye dogs compared to adult blind persons; The dog and person make a larger object for mobility purposes moving in and out of vehicles and along walkways, paths, aisles and corridors; Many warning signs are not understood or responded to by the dog and are dangerous to the unaware blind person; Railings may be helpful and streetlight bells or warning signals are helpful; Changes of grade, ramps, steps or curbs cause problems even with the dog assistance for the blind person; Benches, drinking fountains, comfort stations and entrances are difficult for the blind person with dog to secure, because the dog does not read and sometimes fails to recognize the commands of the person; Overhead obstructions may be unnoticed by the dog and be a danger to the blind student; See also notations under the Long Cane section of these guidelines.	See notations under Long Cane section of these guidelines.	See notations under Visual Handicap sections of these guidelines.

HEARING AID(S)

CHARACTERISTICS	PROBLEMS IN USE	ADAPTIVE TRANSPORTATION NEEDS
Students who must use hearing aids during transit may demonstrate the following characteristics: unable to hear auto horns or shouts of warning or may hear with difficulty or uncertainty; Experience trouble crossing streets and in parking areas; loading zones are particularly dangerous; Problems seeking or asking for directions; Rely on signs, maps and written warnings to be made very clear so that students may find other means to be mobile in their environment. Bicyclists, snowmobilers or trail bikers are unable to successfully signal deaf pedestrians; The visual world is most important to the deaf or hard of hearing; Deaf do not gain from heightened visual perception to the same degree that the blind benefit from greater skill in hearing or touching. Deafness may be brought on by high fevers, cerebral palsy, congenital malformations of hearing mechanism, and other causes.	Mobility of students who use hearing aids and experience deafness or hearing impairments of a serious nature include: a) Lack of visual signals to accompany audible signs or warnings; b) Low lighting in some areas which limits the ability to see for mobility and safety; Hearing aid usage by students may cause consistent problems with defective hearing aids, improper student use of the aids, batteries failing, abuse of the aid, failure to bring the aid to school and/or in transit, unequal performance of dual aids, student turning off or down the volume controls, improper fitting of the aid to the ear via ear mold, and general unreliability of aids when used in normal student environment circumstances.	Ambulatory; Supervision of an intense nature is often required of passengers using hearing aids in transit; Verbal or visual signals to the passenger must be clearly understandable; Driver/aide may utilize signing and speech reading by face-to-face contact with student after his undivided attention has been secured, combined with gestures, hand signals or pointing to dangerous situations in transit; Rules for behavior must be strictly enforced and clearly understood by deaf passengers; Loud and inappropriate behavior may be a consistent problem in transit; Students may not be time sensitive or aware in scheduling transit; Danger in reaching pickup site; Seating should be assigned near driver for better supervision and controlled interactions; Mobility into building may be supervised by driver/aide to assure the passenger arrives safely at service site.

HEMOPHILIA

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Excessive and prolonged bleeding into tissues and joints; Can result in permanent crippling, Health problems and lack of vitality from loss of blood; Youngsters may be boisterous, ignoring the necessary precautions against injury.	Prevention of injury; Control of hemorrhage; Blood transfusions; Orthopedic care to prevent permanent deformity of joints; Counseling against activities or accidents that may cause bleeding; Use of safety precautions at all times to avoid injury to self; Generally avoid contact sports or other injury-prone activities.	Ambulatory; Avoid bruises, falls, abrasions during transit; Secure passenger; Assist with entry and exit from vehicle; Secure sharp edges in vehicle; Secure blood type on person or in transit vehicle records for emergency services if needed; Door-to-door services required.

HYDROCEPHALUS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Excessive pressure on brain and skull resulting in greatly enlarged head; damage to brain tissue; eventual brain deterioration; loss of ambulation; severe mental defect; early death.	Surgical shunt or tube, from cerebral cavity to heart, jugular vein or other part of body to relieve pressure from cranial area.	Semi- or non-ambulatory; Door-to-door transportation services required; Accommodate passenger in wheelchair by using lift; Secure passenger before transit.

INFECTIOUS HEPATITIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Fever, loss of appetite, feeling of weariness, nausea, abdominal pain, headache; Jaundice, bile pigment in liver; Enlargement and tenderness of liver.	Diet, high protein, no fat; Bed rest until liver functioning in normal range; Reduction of pain and fever.	Door-to-door services for this semi-ambulatory passenger during recovery period when school attendance resumes; No adaptive equipment required; Regular bus rules for behavior apply; Regular bus transit is recommended once student is medically advised to return to school.

INFECTIOUS MONONUCLEOSIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Fever, sore throat, chills, headache, abdominal pain; Initial enlargement of lymph nodes; Body rash and occasional jaundice; Possible involvement of central nervous system; Severe cases show hepatitis, meningitis, hemorrhage, rupture of spleen.	Reduction of discomforts; Restriction of activity until symptoms are less severe and medical clearance obtained to return to school.	This ambulatory passenger should be provided regular school transportation services when in later recovery stages with medical permission to return to school; Some door-to-door services for the initial recovery period may be recommended by the physician; Avoid fatiguing the passenger, overexertion, rowdiness in transit; All other regular transit conditions and behavioral rules apply.

LEARNING DISABLED

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates school-related impairment of basic learning processes; Reduced ability in specific academic areas while normal skills are developed in other academic areas; May improperly process visual or auditory information and respond inappropriately in many situations; If other handicapping conditions are noted, the student is ordinarily not considered learning disabled; May be easily disoriented during complex transit tasks that are not routine or quickly learned; Awkwardness, clumsiness, lack of self-confidence, poor self-concept are typical behaviors; May be poorly organized or lack discipline to succeed in some areas; May be unwilling or unable to make decisions having to do with his own life or daily problems; May respond late, inappropriately or not at all to social or interpersonal situations.	Regular class placement for most of the day with special tutoring or special class placement for disabled children for part of the day; Most children do not exhibit unusual or extreme behaviors and are able to succeed in most areas of school, home and in transit without special assistance or supervision; When the child demonstrates confusion as to a task or what is appropriate behavior, the adult should intervene, clearly explaining what behavior is expected and appropriate, when it should be done, and fully expect such behavior then to be demonstrated by the child once it is known; Medications have been often applied and require supervision by adults until the passenger is able to be responsible for self-medication.	Ambulatory; Transportation on regular bus without adaptive equipment is generally appropriate; Normal behavior and rule compliance may be expected when rules are understood; Orientation to rules, resistance to change in simple procedures, or erratic behavior, teasing, or unpredictable behaviors by others or the driver/aide may cause inappropriate resistance, fear or negative behaviors by the passenger with learning disabilities; Ordinarily, other handicapping conditions are not present in the learning disabled passenger.

LEGG-PERTHE'S DISEASE

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Flattening of head of femur (or hip bone); Destruction of bone tissue; Pain, muscular spasms, limping.	Rest from strain or weight-bearing until evidence of repair or no pain or muscle spasm; Bed rest, crutches, surgery to replace bone or socket with prosthesis; Avoid physical activities that put weight-bearing stress on the affected area.	Non-ambulatory; Door-to-door services generally required; Lift used; Secure to seat by aide; Caution in movement, handling and securing of passenger to avoid stress on affected body part; Demonstrate care in movement to seat and while in transit to avoid stress.

LEUKEMIA (CHILDHOOD CANCER)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates general weakness, infections, anemia, hemorrhages on occasion; associated with bone marrow/ blood development; vomiting; May lead to congestive heart failure; May demonstrate various side effects of chemotherapy and radiation therapy treatment; Depression, pain during examinations, loss of hair, energy, appetite; overdependence on others or rejection of others may occur; Recovery may be complete or partial with recurrence possible; Other handicapping conditions not usually associated with the leukemic child.	Hospital stay during diagnosis and initial treatment may be followed by return to regular class placement unless and until symptoms become too severe, when rehospitalization may occur; Chemotherapy, radiation therapy; Careful control of diet, exercise and rest is necessary; Normal activities may be resumed when energy permits; Counseling for student and family frequently beneficial; Adjustment to potential death of child may be necessary unless recovery occurs; Control of information and assistance to parents who may help adjustments of the child to the condition.	Ambulatory; Door-to-door transportation is advised when energy levels are low; Otherwise, regular bus use is recommended when stamina and strength permit resumption of normal behavior; Aide not necessary in transit; Normal behavior and rule compliance is to be expected; Driver may assist in dealing with periodic depression, pain or fear associated with treatment; Acceptance of the child who may lose all hair due to radiation therapy helps other children accept the situation without controversy; Other handicapping conditions are not usually present to be dealt with in transit.

LONG CANE

CHARACTERISTICS	PROBLEMS IN USE	ADAPTIVE TRANSPORTATION NEEDS
Pavement must be firm, smooth, and with a definite edge for persons using the long cane; Unpaved areas are difficult to negotiate; Change in grade may cause problems; Steps must be clearly marked and have adequate railings; Ramps must be identified and integrated with surrounding pavement; Location and operation of drinking fountains is important; Signage must be in raised letters or in braille in buildings Building entrances must be simple and safe; Door handles with ease of grasp and uses; Railings up and down stairs or steps are helpful; There are many causes of blindness or serious visual impairment necessitating students using the long cane; Use of echoes from walls or parked cars help the blind person gain better mobility around hazards.	Activity and mobility by persons using long canes may be limited by: a) Obstacles in the environment; b) Variations in levels of curbs, steps or walkways; c) Upper level hazards (eye or head level or shoulder level); d) Inadequate night lighting for visually impaired with peripheral vision; e) Lack of color contrast or heat reflections off objects; f) Handrails that are not extended; g) Unraised signage and h) Lack of change in pavement or aisle textures.	See Visual Handicap guidelines.

MENTAL RETARDATION (PROFOUND - IQ BELOW 20 APPX.)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates lifetime of dependency on others for all life support, self-care and other tasks; Does not ordinarily learn to talk with others; Demonstrates gross developmental abnormalities; Usually demonstrates other multiple handicapping conditions; Epilepsy, severe cerebral palsy, very limited mobility skills, behavior disorders and other conditions often accompany the profoundly retarded person; May respond to limited self-help or personal care skills for toileting, eating, washing hands, etc.; All behavioral skills are frequently lost with illness and must be retrained and redeveloped in the profoundly retarded person in most instances; Shortened lifetime of most persons results in most not surviving past 40 years; Susceptible to respiratory disease; incontinent; May tend to eat feces without careful supervision and self-help training.	Custodial care with 24-hour supervision is generally required for the lifetime of the profoundly retarded person; Behavior modification techniques are often found to be successful in learning self-help and basic personal care skills; Communication may be done by a modified form of sign language for self-expression; Medications for the variety of conditions of many profoundly retarded persons are generally extensive and must be closely supervised by others; No self-medication is the standard.	Non-ambulatory; Door-to-door transportation mandatory with aide and adaptive equipment, usually lift and wheelchair; Person must be seated, belted in and movements of hands usually restrained; Passenger may bite indiscriminately; Passenger may have to be restrained from self-destructive biting and striking of head on objects, indiscriminate rocking; Incontinence must often be dealt with on the bus; Shortened runs are important for this passenger; Keep warm and comfortable; Must be constantly watched for inappropriate behaviors, with immediate intervention; With several profoundly retarded passengers, two aides and driver are recommended; Medications may have to be transported; First aid for all medical emergencies, including frequent seizures, is necessary.

MENTAL RETARDATION (SEVERE - 21 to 35 IQ APPX.)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates poor motor development, minimal speech, generally unable to profit from training in self-help; Little or no communication skills; School-age can talk or learn to communicate, be trained in elementary health (personal) habits; Cannot learn functional academic skills; May profit from systematic habit training, behavior modification programs; Adults can contribute partially to self-support if under complete supervision in sheltered workshop; Can learn to talk; Usually does not understand the value of money; Generally dependent on others througout lifetime; Shortened lifetime of most persons results in most not surviving past 40 years; Usually demonstrates other handicapping conditions, sometimes multiply handicapped, including epilepsy, cerebral palsy, sensory loss, and may experience very limited mobility.	Behavior modification techniques often found helpful in teaching self-help, personal care skills, dressing, basic care of self as well as basic, repetitive, simple vocational skills; Speech correction and some physical therapy may be required with multiple handicapped, severely retarded persons; Communication may be facilitated by a modified form of sign language and gestures; Medications for variety of conditions of these persons are generally extensive and require close supervision and administration by others who are responsible; 24-hour supervision is generally required.	Semi- to non-ambulatory; Door-to-door services are mandatory due to limited judgment and safety skills; Aide is needed; Adaptive equipment needed, including lift and placement of person when wheelchair bound; Passenger must be seated and secured with belt; Some restraint may be necessary for persons who may strike out at others until behavior modification training for bus behaviors has been completed; Selective placement of person to avoid negative interactions with others may be necessary; Transport of medications often required; First aid for frequent medical problems may be necessary, especially for seizures.

MENTAL RETARDATION (MODERATE - 35 to 60 IQ APPX.)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates significantly delayed maturation and development; Can talk or learn to communicate; poor social awareness; fair motor development; may profit from specific self-help instruction; must be supervised throughout all of life under most circumstances; Can learn functional academics to 3rd or 4th grade level by late teens; May develop vocational or social adequacy when working in a semi-sheltered environment; May demonstrate inappropriate behaviors when under economic or social stress; Can develop into responsible adult with supervision by other adults and an adequate base of prior successful experiences; Frequently associated with other handicapping conditions including epilepsy, cerebral palsy, sensory disorders, behavior disorders and other conditions.	Treatment requires special education placement for academic and pre-vocational training in all areas of personal living; Generalization of learning from one application to another cannot usually be assumed; All areas of adult life demands must be explicitly taught and reviewed in school; Continuous lifetime of supervision is usually required for proper development and maintenance of skills learned.	Ambulatory; Door-to-door services during elementary and junior high years with transition to city transit with training and supervision in the late teens; Adaptive equipment usually not required unless other handicapping conditions associated with the passenger; Aide not required unless epilepsy is a factor; Communication should be simple, slow and repetitive or habitually related to commonly occurring events during transit; Counseling and support for new learning and repeated rehearsals of new tasks in transit are usually required for successful transit experiences; Rule compliance and normal behavior in understood situations may be expected; New learning may be associated with initial inappropriate behavior until learned and familiarized.

MENTAL RETARDATION (MILD - 60 to 75 IQ APPX.)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates delayed maturation and development characteristics but often not noted until school age; Social, communication and motor development close to normal; Can learn academic skills up to approximately 6th grade by late teens; Can be guided toward social conformity; May develop vocational and social adequacy as adult; Requires guidance and assistance when under unusual social or economic stress from others; Can develop into responsible and self-supporting adult when given adequate training and prior successful experiences.	Special education placement for academic classes is necessary to reasonably assure minimal academic success along with maximum integration in vocational, social and interpersonal experiences with regular students; Specific academic training is required using as many applications of acquired knowledge to daily life problems and routine as possible. All areas of development and experience should be provided during schooling; Little generalization of facts or knowledge will likely occur unless reinforced and applied under the supervision of adults; Knowledge base and experiences tend to cause the mildly retarded person to continuously learn and improve general skills throughout his lifetime, building better and better skills.	Ambulatory; Regular bus transportation is generally adequate to the needs of the mildly retarded student who needs to be integrated as much as possible with regular students and to experience as much social success as possible; Adequate supervision by driver is necessary to provide specific, concrete directions, suggestions, controls on the student's behavior; Normal rules during transit apply and should be performed correctly by the student when clearly and explicitly explained by the driver; Assume no automatic understanding of any rule unless specifically taught or demonstrated to the student; Request and expect compliance when behaviors are needed from the student.

MULTIPLE SCLEROSIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Adolescent disease causing breakdown in nerve tissue; Muscle weakness, spasticity of extremities, tremors, unsteady gait, visual and other sensory complications; Eventual total disability and death from secondary complications, including pneumonia or other respiratory distress; Spontaneous recovery may occur in children; Onset indicated often by skin ulcers, urinary tract infections, recurrent or persistent pain, depression, unexplained weight loss or temperature elevation, weakness, incoordination, visual disturbances or sensory abnormalities.	Exercise to maintain joint range of motion and muscle length; Turning at designated intervals to avoid skin ulcers; Physical and associated therapies as indicated; Infection control for urinary tract; Prevention of possible joint contracture; Treatment of decubitus ulcer.	Semi- to non-ambulatory; Provide door-to-door transportation services; Use of lift, Aide help in seating; Secure to seat; Accommodate for mobility skills or passenger in wheelchair.

MUSCULAR DYSTROPHY

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Deterioration, degeneration and wasting away of muscle tissue on the outside of the body frame; Usually affects both sides of the body; Displacement of muscle tissue with fatty tissue; Stomach protrudes; Hollow back; Arms hang limply; Generally retains finger control; Increasingly plump calf size; Weak facial muscles resulting in "flat smile"; Slumping, spinal curvature.	Early orthopedic care to maintain functional motion and prevent deformities; Onset usually at age 3; Walking curtailed at 10 to 13 years; Death in early 20's for Duchenne type (infantile), other types may survive into middle age; Physical therapy, occasionally surgery to prolong mobility and other motor functions.	Semi- to non-ambulatory; Door-to-door services required; Wheelchair confined; Lift used; Seating with special tiedowns or stanchions for wheelchair passenger; Secure passenger; Aide/attendant assistance may be needed while in transport to maintain upright sitting position of passenger during normal movement of vehicle in transit.

NEPHRITIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Puffiness about the eyes and other parts of the body; Vomiting, fever, loss of appetite, anemia, high blood pressure, headache, drowsiness; Often convulsions, possible damage to kidneys; Enlargement of the heart.	Diet regulation; Fluid intake balance; Reduction of blood pressure through medication; Rest and curtailment of activities; Antibiotic treatment; Educational placement in class for physically handicapped students and/or homebound instruction as appropriate.	Ambulatory; Regular bus rules apply; May gather with other students at common neighborhood pickup point; First aid may be applied when symptoms call for it in transit; Advise parents and school personnel if medical problems are demonstrated in transit; Comply with food availability or other medical recommendations made by the physician for the student while in transit as specified.

OBESITY-EXTREME

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates significant overweight for frame and height; Lack of stamina, vitality, shortness of breath; Difficulty in finding appropriately fitting apparel; Oversensitivity to heat; Heat prostration susceptibility; Reduced mobility, agility, balance and coordination due to weight compensation in the body; Depression may be apparent; Overdependence on others for some overweight persons; Fixation of foodstuffs may lead to overeating or choking on food not properly chewed or swallowed; May be rejected by peers; Difficulty securing seating on bus and utilizing seat belts or other restraints; Propensity to injure ankles, sprains, breaks; Bruises with frequent falls or slips; Susceptible to cardiac arrest and other health problems; May have other handicapping conditions with overweight as a secondary concern.	Control of diet by medical supervision; Control of exercise, rest; Counseling for better self-concept and for dealing with rejection problems by others; Learning to walk more carefully; Control of heat prostration through control of exertion and stress; Habit controls for compulsive eating, eating too fast, not chewing food, swallowing slowly and carefully; Careful selection of foods to be consumed.	Semi- to non-ambulatory; Door-to-door transportation required for severely overweight passenger due to strain on heart, possibility of falling or injuring self in walking; Secure with special seating to allow for body size; Use larger seat belt; Use aide for boarding and egressing; Use lift when necessary to safely board the passenger; Control food brought on board not to be eaten in transit; Interact positively with passsenger to build self-confidence and self-concept; All normal bus riding rules and behaviors apply unless the overweight person may also have other handicapping conditions in conjunction with weight problems.

OSTEOGENESIS IMPERFECTA (BRITTLE BONE DISEASE)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Brittle bones leading to multiple fractures with minor stress imposed; Deformity, dwarfism, hearing failure; A triangular facial appearance.	Avoid limb stress in daily activities; Generally confined to wheelchair with extreme precautions required in lifting, moving and manipulation of the body.	Non-ambulatory; Door-to-door services required; Confined to wheelchair; Use lift; Secure in seating; Demonstrate extreme caution in placement of passenger to avoid stress on the body or limbs; Avoid sudden braking, turns or stops; Aide assistance required in transit; Use only emergency lifting and carrying procedures when circumstances require.

OSTEOMYELITIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Acute inflammatory symptoms; Pain, fever, generalized weakness, swelling, tenderness in afflicted areas; Destruction of bone; Draining sinuses; Weakness, irritability.	Antibiotics, diet high in calories and vitamins; Surgical drainage and removal of dead bone; Protection from injury.	Ambulatory to semi-ambulatory; See recommendations for Osteogenesis Imperfecta (above).

PARALYSIS (MONOPLEGIA - LOWER LIMB INVOLVEMENT)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates lack of strength, movement, full or partial paralysis of one limb (arm or leg); Paralysis of leg requires braces, walking canes or use of walker; Wheelchair may be used to assist in walking and to reduce fatigue, but not generally required for mobility; Generally associated with cerebral palsy, stroke, cerebrovascular disease, spinal brain injury; Often associated with other handicapping conditions; Depression may be evident at onset if occurring in childhood or later teens; Poor self-concept often noted.	Regular medical attention required to maintain health and reduce possibility for other complications; Physical therapy; Instruction for appropriate use of canes, walkers or other devices; Control for fatigue by using wheelchair only when needed; Promote personal independence and self-reliance when possible; Regular class placement and normal intelligence expected unless associated with other handicapping conditions; Counseling for adjustment to handicap, improved self-concept and prevention of depression.	Semi-ambulatory; Door-to-door transportation may be needed due to fatigue when lower limb involvement is present; Use of lifts only when individually required; General assistance of aide during boarding is usually sufficient; No special seating or belting required; Aide may be helpful in transport but not required; Normal bus riding rules apply with behavioral standards, just as regular student passengers, unless monoplegic person has other handicapping conditions; Normal communication channels apply; Conversations may be supportive to improve passenger self-concept, avoid depression, utilize orthopedic aids appropriately and to facilitate peer group and driver acceptance.

PARALYSIS (HEMIPLEGIA)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates lack of strength, movement or sensation to some degree on one whole side of the body; Often involves varying degrees of paralysis of one side; Walking with difficulty if at all; Often confined to wheelchair where they are not usually able to propel themselves because of the one-sided paralysis; May be required to use electric wheelchair with manual control on unaffected side of body; Generally associated with cerebral palsy, cerebrovascular causes or brain injury leading to damage of one hemisphere of the brain opposite the affected side of the body; Often associated with other handicapping conditions; Depression may be evident at onset if occurring in childhood or later life; Speech, swallowing, and other muscle groups may be affected, including control of elimination.	Regular medical attention required to maintain health, reduce possibility for other complications; Placement in regular class or physically handicapped class unless other handicapping conditions are present such as mental retardation, deafness or blindness; Speech correction, physical therapy are often required; Care of wheelchair or proper use of other orthopedic aids necessary; Normal behavior and intelligence often present; Maintenance of waste bags; Personal habits and self-care may need assistance and training from others; Counseling for depression control and coping skills may be necessary.	Semi- to non-ambulatory; Door-to-door transportation required; Adaptive equipment with lifts and tie-downs; Secure passenger with seat belt and may require chest belt or shoulder straps in transit; Normal rules for behavior apply; Communication at appropriate level of age and maturity unless other handicapping conditions require modification of communication with passenger; Aide required in transit; Respond to first aid situations with aide and stop bus for driver assistance; Assistance may be required for waste bag management; When speech center is involved, passenger may be able to hear and understand rather than respond to driver/aide; Provide supportive atmosphere to improve self-concept and avoid periodic depression of passenger.

PARALYSIS (PARAPLEGIA)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates lack of strength, movement, full or partial paralysis of lower limbs; Some able to walk with dual crutches, walker and/or braces; Most are confined to wheelchairs, manual or electric; Generally associated with cerebral palsy, stroke, cerebrovascular disease, spinal or brain injury; Often associated with other handicapping conditions; Severe depression may be evident at onset if in childhood or teens; Poor self-concept often noted; Lack of bowel or bladder control may necessitate use of catheters or waste bags.	Regular medical attention required to maintain health and reduce possibility for other complications; Physical therapy; Fitting for braces, equipping for manual or electric wheelchair or other aids; Instructions for appropriate use of aids; Use of catheter or waste bag management must be taught, supervised and/or helped with if not independent in these skills; Regular class placement can be expected with normal intelligence usually found; Adjustment of passenger to peers who may reject the person socially is often required; Counseling to improve self-concept and reduce depression is recommended.	Non-ambulatory; Door-to-door transportation services are required; Aide assistance using hydraulic lift special placement, seating, belting required; Proper placement of orthopedic aids while in transit necessary; Normal bus riding rules apply with behavioral standards same as regular student passengers' unless paraplegic passenger has other handicapping conditions; Normal communications channels apply; Supportive conversations and attention by driver/aide can improve passenger's self-concept, confidence and reduce depression; Assistance may be necessary with waste bag.

PARALYSIS (QUADRIPLEGIA)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates lack of strength, movement or sensation to some degree of all four limbs; May include paralysis of trunk, neck, face; Walking is impossible; Wheelchair confinement certain with electric controls necessary; At times involvement of paralysis may preclude passenger control use and require others to move wheelchair at all times; Lack of bowel or bladder control; May not be able to speak at all; May have reduced choking, swallowing reflexes; Must be moved regularly; Attention to maintain proper body alignment with blocks, pillows or other devices; Supervision of waste management by others is required; May be associated with other handicapping conditions; Often associated with poor self-concept, depression due to lack of self-directed coping skills and constant dependence on others for assistance and survival.	Complete control and assistance generally required of all functions of the quadriplegic; May be placed in regular classrooms part-day and physically handicapped classroom balance of the day; Normal intelligence and learning may be expected unless other handicapping conditions are present which affect learning ability; Waste bag management; Regular moving of person in chair during day required; Proper lifting movement and transferring techniques must be done between chair, toilet, bed, bath, etc.; Speech correction, physical therapy; Dressing, personal care must be done by others; Counseling for depression control and improved self-concept is required.	Non-ambulatory; Door-to-door transportation required with lift, seating, belting, positioning, movement of body, change of posture all done by the aide; Aide required; With more than four quadriplegics in transit, second aide recommended; Use first aid procedures when applicable; Communication by normal channels appropriate to age and maturity of passenger; Normal rules for passenger verbal behavior apply; Assistance with waste bag management; Avoid sudden stops, curves, bumps; Do not permit eating on the bus, as choking or swallowing may be a problem without extra knowledgeable supervision; Counsel for improved self-concept, adjustment to limitations and avoid depression where possible.

POLIOMYELITIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Damage to nerve cells in gray matter of spinal cord and/or areas of brain, resulting in pain, spasticity, weakened and paralyzed muscles; Skeletal deformities; Muscular paralysis.	Acute stage relief of pain; Analgesics, sedatives; Hot packs, bed rest, avoidance of exertion, good diet, physical therapy.	Varies with limb(s) and body areas involved; Semi- to non-ambulatory; Varies with individual in mobility skill development, physical strength, maturity of judgment during transportation cycle demands; Accommodate for crutches or braces, wheelchair as indicated; Door-to-door services required.

PULMONARY TUBERCULOSIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Infection of respiratory system; Cough, chest pains, fever, loss of weight, tiredness.	Antimicrobial therapy; Maintenance of nutrition; Avoidance of fatigue; Bed rest until substantial evidence of improvement.	Ambulatory to semi-ambulatory; Regular bus rules apply; May gather with other students at common neighborhood pickup point; First aid when symptoms call for it in transit; Advise parents and school personnel if medical problems are demonstrated in transit; Comply with food availability or other medical recommendations made by the physician for the student while in transit; Door-to-door services required.

RHEUMATIC FEVER

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Chronic infection of connective tissues affecting joints, heart and blood vessels; Arthritic, abdominal and chest pains; Skin rash, shortage of breath; Heart damage from continued or prolonged attacks; Swollen arm joints; Jerking, uncontrollable movements; Periodic recurrence of above signs.	Rest and limitation of activity; Anti-inflammatory drugs; Sedatives, aspirins; Prevention of reinfection by penicillin therapy.	Semi-ambulatory; Door-to-door services generally required; Use of lift and assistance to avoid overexertion, painful movements; Secure passenger in seat.

SCOLIOSIS

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Lateral curvature of the spine; Body thrown out of alignment, resulting in irregular growth and deformities; Restriction of internal organ function, breathing, mobility.	Casting and bracing to correct or prevent deformity.	Semi- or non-ambulatory; Door-to-door services recommended to avoid fatigue and reduce chance of injury; Use of lift; Secure passenger in seat; Assist in transit to move and make posture adjustments for passenger comfort.

SICKLE CELL ANEMIA (CHILDHOOD)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates abnormal production of red blood cells leading to insufficient oxygen supply to body tissues; Results in pain, chronic fatigue, limitations of ordinary physical activity; May suffer from generalized infection of body, respiratory distress, hemorrhage; May lead to kidney failure, osteomyelitis, hepatitis or negative transfusion reactions; May experience associated depression, lack of initiative, poor self-concept, dependence on others for services (personal care); Restricted activity and diet are required.	Medical treatment includes blood transfusion, infection control, careful control of diet, exercise and rest; Regular class placement likely, although physical activity may be greatly restricted; Counseling for improved self-concept and associated depression may be advised; Care should be exercised to avoid colds or diseases and infections; No body contact sports or rough play; Counseling children who would prefer not to exercise control over activity may be necessary; Counsel for maximum self-sufficiency and responsible care for personal health.	Semi-ambulatory; Door-to-door services recommended due to limited stamina, strength; Possible reduction of infections, colds and diseases when transportation is provided rather than walking to school; Aide not necessary; First aid may be applied as needed by driver; Normal rules and behavioral expectations apply; No adaptive equipment required; May be transported on regular bus; Control for rough behavior on bus; Counsel passenger not to waste strength; Maintain adequate self-concept, avoid depression or feelings of helplessness or dependence on others; Promote independence with responsible care for self.

SPEECH IMPAIRMENT (GENERAL)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates lack of appropriate speech usage or development due to defective speech mechanism, language impairment, stuttering, or voice impairment; May have normal, but very immature speech for age and grade placement; Lacks confidence when speaking; May receive peer rejection or making fun of speech-impaired person; May have poor self-concept, experience depression associated with peer rejection.	Speech correction; Surgery may help with certain types; Language development experiences to build vocabulary; Stress, relaxation or breath control may assist persons who stutter; Build self-concept and self-confidence during speaking; Utilize other abilities or skills to gain peer acceptance, recognition, better self-concept; Develop alternative ways of expressing self and/or augment with gestures or body language understandable by others in addition to attention to correct speech habits.	Ambulatory; Regular transportation usually required; No aide or adaptive equipment unless associated handicapping conditions require it; General slow communication without rush or stress helps the person to better understand and communicate with driver and peers; Normal rules of riding behavior apply; Counseling to use proper speech learned and applied in transit is necessary; Do not allow improper speech techniques in transit.

SPINA BIFIDA

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Defect of closure of spinal cord; Protrusion of nerve fibers and other contents of cord into exterior sack; Paralysis of lower limbs and internal organs below defect from cutting off nerve supply; Often associated with hydrocephaly; Spinal curvature; Lower limb involvement including deformities of ankles and feet; Paralysis of bladder and bowel control; Frequent psychosocial adjustment problems.	Surgical treatment; Orthopedic care to maintain straight spine, legs, feet and mobility of joints; Treatment for urinary tract infections; Bowel and bladder management; Personal hygiene care.	Semi- to non-ambulatory; Transport in a secured wheelchair or other orthopedic device provided; Secure into seat; Use lift; Provide door-to-door services; Assist in boarding; Obtain information from responsible others regarding route and destination; Have aide provide for bladder and bowel control steps; Avoid sharp turns, bumps or sudden stops.

STROKE - CHILDHOOD (CEREBROVASCULAR DISEASES)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates brain hemorrhage, disease, blockage of blood flow in the brain for a variety of reasons; Results in hemiplegia (paralysis of one side) or specific paralysis of body areas; Aphasia (loss of control to some extent of the speech center in the brain); Experiences confinement to wheelchair or reduced mobility; Problems with eating, dressing, personal hygiene, communication abilities; Experiences associated depression, poor self-concept, feeling of dependence on others; May lose bladder or bowel control.	Provided comprehensive surgery and/or rehabilitation services including physical therapy, speech therapy, occupational therapy, orthopedic aids; Counseling services for adjustment to handicap, vocational training in other areas of competency; Learn management of waste bags, improvement in self-care skills, personal hygiene, dressing, bathing, and other daily functions; Encourage self-sufficiency as much as possible.	Semi- to non-ambulatory; Requires door-to-door services with aide and adaptive lift equipment; Management of wheelchair while in transit or care of other orthopedic walking aids is necessary; Communication to passenger may be normal, but communication from passenger via speech may be very restricted (aphasia); Normal rules of behavior apply on the bus to the child with stroke problems; Counseling and interaction to maintain self-concept, confidence and improve willingness to be as self-sufficient as possible.

TUBERCULOSIS OF BONE AND JOINT

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Formation of tubercles, destruction and disintegration of bones and joints; Pain, swelling, muscle spasms, rigidity, and atrophy.	Antibacterial therapy, streptomycin; Well-balanced diet; high vitamin content; Rest, immobilization of affected part.	Semi- to non-ambulatory; Door-to-door services dependent upon limb(s) affected and mobility status; Accommodate for crutches or braces, wheelchair if indicated; Physical therapist should demonstrate care in lifting and handling in transit.

VISUALLY IMPAIRED (PARTIALLY SIGHTED)

CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates limited visual acuity from 20/70 to 20/200 with a restricted field between 20 degrees to normal; Requires adaptations to read printed word; May include serious refractive (lenses) error resulting in visual limitations after correction; May include severe astigmatism, restricted visual field, strabismus (crossed eyes) or nystigmus (fluttering eye control); May have imperfect depth perception, color blindness, faulty muscular control, extremely poor peripheral vision or central vision or other conditions restricting the use of the eyes for learning and relying on other channels to learn instead of, or in addition to, limited vision skills.	Special class placement for part of the day with use of braille, large print learning materials or audio tapes with regular placement for balance of the day; Training for mobility in the school building and other familiar or frequently used places in public or the home; Develop independence in movement in environment, build self-confidence; Maintain and improve self-concept; Build for student self-sufficiency.	Semi-ambulatory; Door-to-door transportation recommended unless skills for orientation and mobility in the community are developed to supplement walking with transportation services; Aide not necessary; Regular vehicle or bus may be used; Seat passenger close to door for ease of entry, exit, seating, and avoidance of objects or persons blocking movement; Assign seat for security of passenger in independence during transit; Use passenger name when communicating to provide passenger with cue that driver is communicating directly to passenger; Normal rules and behavioral standards apply to this passenger; Avoid contact, bumps or hits to the eye for possible additional blindness or injury; If sensitive to light, place in low-light seat on bus; Permit behaviors leading to self-sufficiency without risk to student of injury or harm.

VISUALLY IMPAIRED (BLINDNESS)

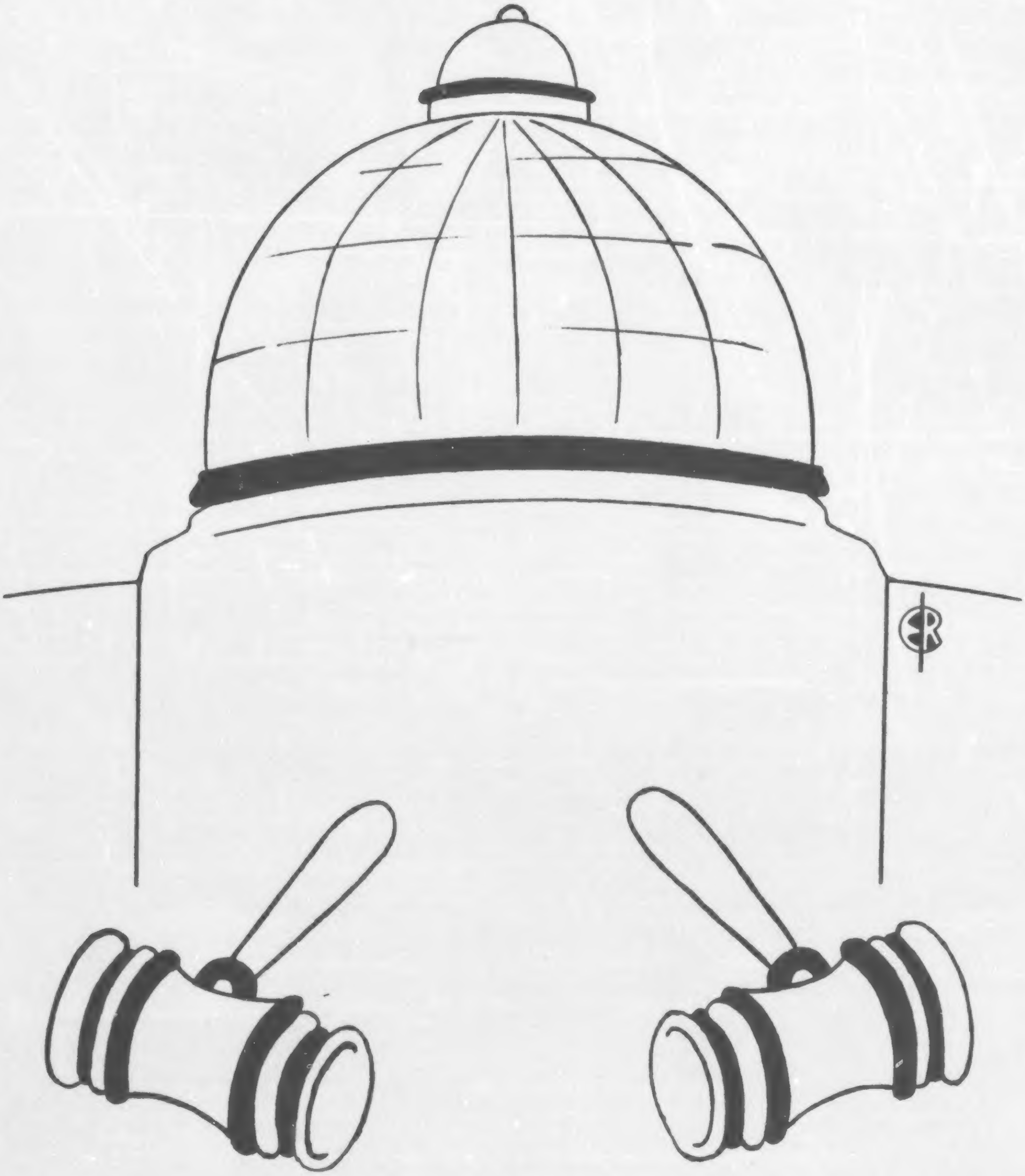
CHARACTERISTICS	TREATMENT	ADAPTIVE TRANSPORTATION NEEDS
Demonstrates lack of functional sight; Reliance on other learning channels or total blindness; 20/200 visual acuity and 20 degrees restriction of visual field or less; May require guide dog or long cane instruction and general mobility training; Lack vision-based concepts such as distance, large object size, directions of orientation, color; Unable to recognize dangers not associated with sound cues; Difficulty in new surroundings or with surroundings familiar but with changed elements; May need to constantly reorient self to surroundings, neighborhood, routes to and from familiar sites when elements (weather, blocks, etc.) change.	Surgical treatment may assist; Refraction for use of available vision; Glasses for eye protection against injury or infection rather than for vision; Mobility training; Use of dog guide or long cane; Build and maintain maximum self-sufficiency; Counsel for improved self-concept and avoidance of depression; Build other skills not associated with vision; Prepare for vocation not dependent on sight; Orient regularly to familiar surroundings and routes to and from daily activity locations; Placement in special class for blind may be supplemented with regular class placement for part of the day.	Semi-ambulatory; Door-to-door services required until confidence and skill is gained to supplement walking with transport service; Normal rules of behavior and expectations apply; Driver may provide services required without adaptive equipment on regular bus without aide; Care of dog guide and/or long cane in transit is required if used; Boarding and seating must be supervised; Use of seat belts is mandatory; Verbal behavior of student may require special consideration by the driver or compliance with normal rules for passenger transport.

WALKER

CHARACTERISTICS	PROBLEMS IN USE	ADAPTIVE TRANSPORTATION NEEDS
Required for persons who are weak or unsure in both the arms and legs, who can take only small, supported steps; Size varies with the user; Front wheels or rear wheels may be used; Other walkers do not have wheels, but four posts with cross members for support midway up the structure and a cross arm for gripping by the user; Posts may have rubber grips for improved traction on walking surface and rubberized hand grip areas for ease of handling by the user; Construction is of aluminum or steel with emphasis on light weight, using hollow tubing formed into the proper shape; Base of legs is wider by several inches than the width at the hand grip level of the walker; Students using walkers are often afflicted with arthritis, cerebral palsy, hemiplegia, incoordination, monoplegia, multiple sclerosis, muscular dystrophy, stroke, osteoarthritis, osteomyelitis, rheumatism and other conditions.	Mobility in use may be limited because of: a) Rough, uneven pavement or loose rock; b) Projecting or overhanging steps; c) Risers greater than 6 1/2", treads less than 12"; d) Ramps over 1 in 12 (preferably 1 in 20); e) Lack of at least one handrail on steps or ramps; f) Seating less than 17" high or without arm rests; g) Walks less than 5' wide, if two people must pass; h) Lack of convenient restrooms; i) Insufficient lighting; Curbs may be too high, pavement too soft, rough or gratings on walking surface; Drinking fountains are often inacessible; To stand using walker, the person must usually grasp a stable object in front of the seat and pull forward; Doors are difficult to open and handles must be graspable, manageable and at the right height; Railings on either side of the door are sometimes not wide enough to accommodate the walker and impede the maneuvering of the walker itself; Steps or stairways are often not wide enough for walker and others to pass or use safely together.	Semi-ambulatory; Hydraulic lifts required; Special seating with front handgrasp capability is required in transit; Passenger should be placed as near to the door or lift as possible and safe; Care should be taken to store and secure the walker in transit to avoid dislocation and damage or aisle blocking while under emergency driving conditions; Supervision during turning, stopping or starts and stops is necessary for passengers who may lack torso strength or balance ability in transit; Care for clean aisles when entering or leaving the bus is important; Mobility is limited getting to pickup site and securing accessibility in the building; Care for supervision at site and in building is necessary.

WHEELCHAIR (MANUAL OR ELECTRIC)

CHARACTERISTICS	PROBLEMS IN USE	ADAPTIVE TRANSPORTATION NEEDS
Length, rear handle to footrest: 30/60 inches; Width, when open: 22/36 inches; Height of seat from floor: 14/24 inches; Height of armrest from floor: 24/36 inches; Height of pusher handle from floor: 28/40 inches; Minimum turning space: 56" x 56"; Two chairs passing in opposite directions: 60" minimum; Students who use wheelchairs are non-ambulatory and may suffer from arthritis, ataxia, spasticity (cerebral palsy), stroke, embolism, hemophilia, hemiplegia, paraplegia, quadriplegia or triplegia; They require conservation of energy, ease of ambulation and convenience of access to facilities.	Changes in grade present a serious problem; Curbs, steps and ramps may be difficult to negotiate; Surfacing is critical; Weather, such as ice, snow, rain or sleet presents problems; Drinking fountains are often inaccessible; Transportation mode changes are often laborious; Movement in a wheelchair is often difficult due to: a) Rough, tilted pavement or deep, loose rock; b) Curbs without curb cut ramps; c) Ramps greater than 1 in 12 or that are longer than 30 feet without a level space of at least five feet; d) Handrails not at proper height or not projecting on level ground at end of ramps; e) Insufficient walk width for wheelchairs passing; f) Inadequate space next to benches and space under tables; g) Gate openings that are not maneuverable from a wheelchair and spring loaded doors over 8 pounds opening pressure.	Non-ambulatory; Hydraulic lifts with special floor- or wall-mounted braces required; Specific seats to be assigned; Supervision before and after boarding is required to include accompanying student into building, assisting with site or architectural barriers on an individual need basis; Regular bus behavioral standards apply in most instances; Preparations for transport, securing seating, making body adjustments in transit, passenger interactions, and accessibility to site and service are adaptations persons in wheelchairs require in transit.



PART THREE

BEHAVIOR MANAGEMENT OF STUDENTS IN TRANSIT

INTRODUCTION

When all other elements of transportation services have been considered and prepared for, including specially equipped vehicles, special routes, special handling of handicapped students, there remains the problem of behavior mangement. Door-to-door transportation of handicapped students requires behavior management techniques for the inappropriate behaviors students occasionally demonstrate. From the parental door to the classroom door, behavior management by the driver and aide is necessary to assure a safe transit, orderly loading, movement and unloading of passengers, and a positive attitude on the part of the students to meet their day at school and their return home.

The school bus is in many respects a "classroom on wheels." The driver and aide, as behavior managers, are very much like classroom teachers for a short period of time during transit of students. Frequently, the driver is called on to manage the behaviors of a larger number of students on the vehicle who are handicapped than special educators in classrooms. However, the management of a larger group of students by the driver and aide is for a shorter period of time. It is important to consider the behavior management techniques proven to be successful in the classroom and in the parental home that may be safely and appropriately applied on the bus for each student being transported. Communication and cooperation between parents, driver and school personnel is an integral part of behavior management.

Two principles are important to remember in managing behaviors of handicapped students. First, nothing indicates any handicapped student will be a behavior management problem on the bus. Individuals create behavior management problems, not handicapping conditions present in students. Even behaviorally disordered students in school special education programs who exhibit very negative behaviors in the classroom may not do so on the bus. Secondly, situational behaviors are typical of handicapped students. They react differently to a bus driver or aide situation than to their teacher or parents. Behavior is situational involving particular students, particular adults and specific behavior management problems. Diagnosis of the student's special education problems for the classroom may not always relate to the type of behavior problems exhibited on the bus. Problems the student exhibits at home may not be the same or present at all on the bus. The driver must cope with students in a special situation, that of being transported on school vehicles.

Wallace and Kauffman (1973) have stated that the student must learn to manage his own behaviors in the school setting by:

1. Attending school willingly and regularly.
2. Accepting the authority of the teacher and other school personnel.
3. Working cooperatively and constructively in the classroom.
4. Establishing positive relationships with peers.
5. Exhibiting behavior indicative of a positive self-image.
6. Exhibiting appropriate behavior outside the classroom.[1]

Students with or without handicapping conditions can exhibit lack of success in managing their own behaviors in any of the areas described above. Not accepting their individual responsibility to manage their own behavior in the above areas while in transit may be somewhat more serious in consequences than in the classroom. The classroom does not move at road speed and endanger the lives of all passengers when situations develop that threaten safety in transit. When one person is threatened in terms of safety while in transit, all are threatened. The behavior management guidelines provided in this book will assist driver and aide to better manage the inappropriate behaviors of handicapped students that do happen in some situations. Key concepts in behavior management in this section are (1) Appropriate/inappropriate behaviors; (2) Dealing with individuals; and (3) Dealing with situations.

APPROPRIATE AND INAPPROPRIATE STUDENT BEHAVIORS

Human behavior is socially defined by rules of behavior generally accepted as appropriate. Many rules are expressed in the negative (e.g., "Don't run in front of the bus!). Other rules are expressed positively (e.g., "Walk in front of the bus only when the driver signals you.") Human behavior generally takes two people to manage: the rule breaker and the rule enforcer. Adults, particularly the bus driver and aide, are placed in the role of the rule enforcer and are responsible to maintain appropriate behavior in students and themselves in transit. Students do occasionally act in the role of rule breakers. It has often been stated that "rules are made to be broken." When rules are broken, various forms of punishment or controlling actions occur for the rule breaker provided by the rule enforcer. When behaviors are appropriate and comply with positively stated rules, rewards are provided the student in various ways by the rule enforcer. Without rewards for students who are performing appropriately while in transit, students may not maintain their appropriate behavior consistently. When behavioral standards are well established and habits of appropriate behaviors are demonstrated consistently by the driver, aide and the students, very few instances of inappropriate behavior may be expected in transit. The positive pattern has been established. If such a positive pattern is not established, much work is required to secure and maintain such a pattern. The pattern begins with the driver and aide as rule enforcers and rule makers.

Rules for human behaviors should be kept minimal, relevant, meaningful and positive. Minimal rules are the fewest needed to safely and positively manage human behaviors. Is the rule needed? Can we get by without stating the rule? Do students already know and follow the rule without stating it? Are several rules dealing with the same behavior? Can the rule be stated simply, briefly, without multiple related rules?

Relevant rules are rules which matter and which control important human behavior. If the rule deals with attending school, authority of teachers and other personnel, working cooperatively and constructively, relating to peers positively, demonstrating positive self-image and appropriate behavior in social situations, it is likely to be relevant to school transportation when other criteria for rules are also met.

Other criteria for rules require them to be meaningful and positive. Meaningful rules are those rules which are specifically related to inappropriate behaviors or to student goals or appropriate behaviors. Other rules created out of tradition, personal style of the rule enforcer, and rules emerging from one event that has not repeated itself in some time, dictatorial or overly rigid rules that may cause student backlash, rules not supported or believed in by parents and other similar rules are meaningless. Positive rules are those which tell the student what to do rather than what not to do. Positive rules offer a goal to work toward rather than a veiled threat to avoid.

Typical rules for riding the bus are:

1. Remain seated at all times while bus in is motion. Occupy assigned seats when such assignment has been made.

2. Refrain from using loud or boisterous talk.
3. Obscene or foul language will not be tolerated.
4. Passengers are required to be obedient and respectful to the bus driver. Passengers must show respect for other passengers. Fighting is not permitted.
5. At no time shall materials of any type be thrown out of the windows or inside the bus.
6. The emergency door shall not be tampered with or an exit made from the same except in an emergency drill.
7. A student shall not at any time have arms or head extended from a bus window.
8. Smoking is prohibited at all times.
9. A bus should not be unduly littered, defaced, or damaged in any way.
10. Passengers shall refrain from talking to the bus driver while the bus is in motion.
11. Open food or beverages are prohibited on the bus.
12. Windows are not to be adjusted without permission of the driver.[2]

Most of the rules listed above, while relevant and meaningful, are negatively stated. To establish rules that the rule enforcer can enforce in transit with handicapped students, such rules much be positively stated and they must be individually designed per passenger. Group rules for handicapped students in transit do not fit many of the passengers who are either not breaking the rule or are breaking other rules not stated. Written rules are not helpful for the many handicapped students who do not read. Spoken rules may not be helpful for those handicapped passengers who cannot hear others' speech or even their own. Rules that will work on the bus with handicapped students must be lived rules, or rules which are well known by whatever means the driver has available to all student passengers regardless of their particular handicapping condition. Such rules stated, demonstrated by the driver with all student passengers, consistently lived by the driver and aide as an example to all passengers, are the lived rules.

Restating rules provided by state departments of education or school systems that are intended for non-handicapped passengers may be necessary to adapt them for handicapped passengers. Most of the established rules are time proven and worthwhile, relevant for safely transporting student passengers. However, they must be interpreted differently to each handicapped student according to the student's particular needs and learning style.

A restatement of the rules found typically in driver manuals throughout the nation might be worded like this:

1. Sitting in your seat with the seatbelt snug is the safest place for you to be while on the bus when it is moving. If you ask, the driver may consider letting you move to another seat when the bus is stopped, if it is safe.
2. Talking quietly on the bus with others will help the driver to hear what is going on and drive more safely. Too much noise from talking or shouting on the bus makes your ride unsafe for you and everybody else.
3. The driver and aide care how you talk. Bad language, even if you are angry, will not be permitted. Go to the driver or aide when you are angry. He can help you.
4. The driver and aide are in charge of you while on the bus. Respect them and do what they say. Respect others on the bus. If you get into a hassle, let the aide help you settle the problem. It is better than fighting on the bus and being suspended or hurt.
5. Throwing anything on, in or off the bus is very dangerous. When you add the speed of the bus and the speed of the object thrown, it could be fatal to others outside. Is the risk of killing worth it?
6. Emergency doors are only for emergency use. You run the risk of injuring yourself jumping out of the emergency door even during a real emergency. Why risk hurting yourself unless it's the real thing? Damage to the emergency door through misuse could mean your life in a real emergency.
7. Smoking on the bus is unsafe because it is a fire hazard. Smoking pollutes the air for everybody and is a health hazard for all who breathe the air on the bus. If you smoke, smoke outside the bus.
8. Inside the bus is the safest place to be while moving. Safe bus construction and safe driver operation mean you are safe while riding to school or home. Serious injury could result when you have arms, legs or your head out the window when the bus is moving.
9. Pride in your school means pride in your bus. Your bus is part of your school. Keep it clean and safe just as you would want your own home or school to be clean.

10. Talk to the bus driver and aide when you come on to the bus, when you are stopped and when you leave the bus. When the bus is moving, however, talk only to the aide.
11. Opened food or beverages on the bus is a health hazard. Who wants other passengers' germs on his food when he opens it on the bus? It is a safety hazard. Rolling cans or broken bottles can cause injury. Food opened on the bus is food wasted.
12. The driver cares for the comfort of all passengers. You should care for the comfort of all passengers by opening your window only with the driver's permission.

The restated rules above do not necessarily fit all handicapped student passengers. While they are stated positively, and are meaningful and relevant for most handicapped passengers, they will not be automatically understood by everyone. To make rules understood by all passengers, the driver must ensure that rules are interpreted using the following guidelines:

1. With different students who break the same rule, the driver and aide should respond to that student as a team. The same behaviors should apply to the driver as to the aide. A driver who may be consistently responding to a student who breaks a rule may be undermining the aide, who responds to the student in a different manner. Once the rule is stated by the driver or aide, the other should support it. Drivers and aides who change the way they respond to the same student will not show the student a consistent pattern of rule enforcement. Students may go to one adult for permission to do something that the other adult will not permit.
2. All rules for students are equally valid rules for drivers. For example, the driver who occasionally demonstrates bad temperament, a poor-self image, depression to his student passengers may expect exactly the same treatment from those passengers. Drivers and aides should not bring personal problems onto the bus with students. Students are encouraged not to bring their problems of home or school onto the bus. When they do, however, the driver and aide are responsible to deal with such events in an adult, positive, supportive manner.

3. Gear the rule to the individual student's personality and maturity. You can soon tell which students respond best to authority, which other students respond best to reason and which students respond only to consistent behaviors on your part.
   The student who responds only to authority must be demonstrated each rule when it is broken, or before it is broken at the beginning of each school year. Doing, rather than talking, is best for this student. Sit him down in the appropriate seat, secure the seat belt the way you want it and begin the school year and every school day for the rest of the year in the same way. Do not vary at any time if at all possible. Do not respond to requests for change from the student who responds only to authority.
   The student who responds to reason may be given the rules that have been restated above. The rationale for each rule may be explained individually to each student who wants to know why about each rule. The information shared must be geared to the maturity of the student and the student's emotional stability. Safety issues may be avoided for the student who is emotionally inclined to panic.
   The student who responds only to what you do and not to what you say is another type of student that requires special interpretation of all rules in transit. This student has a highly developed sense of fairness, including all adults, other students and himself. Some students demand others to provide them with exceptions to the rules, but would not allow others any exceptions with rule enforcement. This type of student is generally dealt with best if the driver and aide consistently live by all rules they demand of their student passengers. At any time that drivers do not follow a rule, the student considers himself to be exempt from such a rule. Such students generally demand the highest standards of behavior from others, but may not demand the same standards for themselves.
4. Do not compromise on any rule dealing with safety for passengers. Consistently enforce and demand all rules that ensure the safety of any person on board. Such rules may not be popular or well received, but must be consistently enforced when safety issues are involved.

5. Change rules when they need to be changed after seeing that application of the rule as it stands would cause a threat to the health, safety or welfare of students or adults in transit. Changing rules is not the same as using exceptions to given rules. Changing rules involves a more permanent change than for a single student or for not applying a rule in a particular situation. Changing rules should involve more than the driver and aide. It should involve others, particularly the transportation supervisor or director and the director of special education. Principals, special educators and parents must also have direct input into changing rules. Any change of any well established, time-proven rule involves others who must consider the implications of the change along with the driver and aide. Such changes are not subject to student interpretation, but are subject to adult interpretation.
6. Finding exceptions to the application of any given rule is an individual student-by-student process and only for a particular situation. Adults are required to demonstrate the best judgment in any situation involving children or adolescents. Particularly in a transit situation with handicapped students, the adults in the situation and not the students are responsible to determine whether there will be an exception to a rule for a particular student or not.

   There should not be an exception to a rule whenever such an exception clearly involves a threat to safety of anyone in transit, student or adult. Such exceptions should never be made. There may be exceptions in the application of rules where carrying out the rule may be harmful or place the student or adult in threat to his personal safety. In such instances, the health and safety of the student far outweighs any rule or its application in transit. Situations which permit a wide interpretation of the rule by the driver or aid may cause adults to determine that a certain rule may not be applied to a particular student. There is no set of rules, no matter how well thought out, comprehensive and time-proven, that will apply to some of the situations found in transporting handicapped students. Under conditions where the rule does not seem to apply, or only partially applies, it is required that the adult make the decision with every person's safety in consideration. Hindsight of any decision made in this manner will probably be the best basis on which adults may learn to improve their on-the-spot decision-making skills when reviewed by themselves and others. In the situation, the adult must decide and consider first the safety of all persons involved. Changes in rules are often the result of conditions or situations that develop that nobody would ordinarily expect or predict.

7. Reduce the number of rules that are used in transit to the barest minimum. Keep them there. Change them only when they clearly and obviously need change (when they involve threats to student or adult safety). Remind students of the fewest number of rules possible and only when such reminding will cause the student to behave more appropriately. It is less effective for the adult to review all of the consequences of a rule's being broken. It is more effective if the rule is simply stated to the student and the breaking of the rule is left up to the adult only when it has been clearly and consistently broken.
8. Satisfactory rules lived with in transit by all persons tend to have a life of their own. Students and adults alike support the rules. They incorporate them into their thinking and forget them as rules. They become a normal part of the transportation experience. Only when other students who are new to the situation break the rules do other students think of such behaviors in terms of "rules."When new students break the rules other students look to the adults in the situation to enforce the rules with the newcomer. If such rules are not enforced by the adult to the newcomer, other students immediately consider themselves no longer constrained by the rule which they had earlier accepted as normal, expected. Great care must be demonstrated by adults in transit for newcomer students who may challenge rules that other students live by. Such challenges, if successful by the student, will destroy rules more quickly than any other process.

Rules are made to be broken or lived by. No other medium point exists for rules of student and adult behavior while in transit. What is valid for the student is valid for the driver and aide in terms of rules. If students cannot smoke in transit, then drivers and aides may not smoke. If language is monitored by the driver or aide for the student, then the student has every right to monitor the language used by adults. Rules can be real without being written down or verbally stated to anyone. Such rules form the background of safe and appropriate transportation for handicapped students whether such students may be able to recite such rules to others or not. The fact remains that in good transportation situations most of the rules are never written or stated and are only mentioned to specific individual students when their behavior warrants their being reminded what is and what is not appropriate behavior in transit. Punishment is not so important for the adult, but it is important to remind the student of the rule and make sure he clearly understands what is and what is not appropriate in terms of his own behavior in transit. In this viewpoint, rules work when lived, and don't work when not lived by everyone.

DEALING WITH INDIVIDUALS

Many students experience up to an hour or more each school day on the bus. The driver or aide is in a position to become very familiar with individual handicapped students, their parents, their teachers. This personal knowledge of students and a caring, sensitive attitude by the driver and aide is the best environment in which to transport handicapped students.

> Behavior management principles refer to efforts to modify individual children's maladaptive or problem behaviors, and to replace them with behaviors that are adaptive and appropriate. Behavior management efforts must emphasize the development of desirable and adaptive behaviors in specific children, rather than merely the elimination or suppression of undesirable ones. Reliance on punishment as the primary means of behavior control is unacceptable.
>
> Behavior management, like all other aspects of the individual's program, must reflect evaluation and decision by the individual's interdisciplinary team, or placement team, and be incorporated into the individual program plan or individual educational plan. Methods of utilizing punishment, restraint measures, other aversive techniques, or drugs, must represent the least restrictive effective alternatives, and be designed to lead to less

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> restrictive ways of managing, and ultimately to the elimination of the behavior in which they are employed. Special attention must be directed to assuring protection of the rights of the individual when some such techniques are used.[3]

The quotation above represents the most general and widely accepted standards for behavior mangement of students at the present time. The first paragraph essentially calls for all adults who utilize behavior management to emphasize the positive in student's behavior rather than eliminating the negative. If done properly, behavior management can build on strengths, skills and personal competencies of students without focusing only on what the student does not do that he should be doing, or does do that he should not be doing. The second paragraph emphasizes the reality that adults (drivers and aides) in the transit service delivery for handicapped students must not plan or do behavior management without full consideration for the rights of the student, his parents, and the school. Formal or written behavior management plans that are being systematically applied to individual students while they are in transit are a legal part of the student's Individual Educational Program (IEP) even though the content or goals of the behavioral change are not educational or academic. The contents or behavioral goals of each student may only deal with transit behaviors. In the case of students being controlled or influenced by behavior management techniques through their drivers or aides, such techniques must be approved by the director of special education and of the placement committee of the school system where the student attends.

Basic principles of individual student behavioral management include:

1. Effective student management requires close attention to the student's behaviors, or behavioral patterns. Placement committees will require documentation of behavioral problems of individual students while in transit. Drivers and aides must write up according to the placement committee's specific data requirements the student's performance over a period of time before an effective plan for behavior management can be developed and implemented.
2. Behavior is a function of its past consequences: a) a student does what pays off; b) a student does not engage in behavior that does not pay off. Careful evaluation by others of the dynamics of student behavior in transit will require others to join driver and aide on

the bus. The first few experiences with a stranger on the vehicle will color the behavior of many students. But after further trips, the student behavior is likely to return to the earlier level of problems. Others must logically see what the driver and aide may have already experienced for a period of several days, weeks or months. Drivers and aides may not realize that some of their reactions to students' inappropriate behavior may be paying off students. The process is very subtle and is more easily observed by others not directly engaged in the transportation process to be noticed. Changes in driver or aide behavior in the way they respond to students when they demonstrate inappropriate behaviors may be the most important behavior management techniques. Often the changes of behavior in driver or aide have more profound influence on student inappropriate behavior than working directly with the student on his own behavior in transit. Drivers and aides who do not respond or "pay off" students in expected ways will see significant and rapid changes in student inappropriate behaviors.

3. Behaviors which are reinforced will become more frequent and behaviors which are not reinforced will decrease in frequency. Abrupt changes in driver or aide behavior toward individual handicapped students who exhibit inappropriate behaviors can reduce the incidence of student behavior but may not eliminate it. Over time, consistent reactions by the driver and aide to the student when he behaves inappropriately will wear away his tendency to act inappropriately. Punishment of the student directly may not make a long-term change in the student's behavior, only stop the behavior temporarily. Long-term changes in student behavior are sought with behavior management techniques.
4. Effective behavioral management requires systematic arrangement of the environment to insure that the student's appropriate behaviors are reinforced and his inappropriate behaviors are not reinforced. The statement "Catch them being good" is very important when using behavior management. Only when drivers and aides have had some on-the-job training for behavior management and reinforcement of positive student behaviors conducted by other professionals, is the principal of reinforcement likely

to be clearly understood and observed in student behavior. An interesting side effect of drivers and aides attempting to change the behaviors of their student passengers is that their own behaviors in transit are often significantly changed. They become more observant of others and themselves, more positive, eager to see the good in themselves and others rather than noticing behavioral problems as much as before and similar changes.

5. Patterns of reinforcement provided by the driver and aide affect the likelihood of occurrence of the student's various behavior patterns, both appropriate and inappropriate. To change student behavior the reinforcement must depend upon the student's appropriate behavior actually demonstrated or observed. Reinforcement does not come from implied behaviors of students, only that which can be seen by the driver and only after it has occurred, not before. The reinforcement must be provided immediately after the student has demonstrated appropriate behavior without delay. Reinforcement must be consistent between driver and aide or others in transit. One adult must not reinforce behavior of students more or less than another adult. Reinforcement must be frequent at first, less frequent when the student's behavior has been established over time. The most efficient way to establish or develop a behavior is to reinforce that behavior each time it occurs. Once a behavior is established, it can be strengthened and maintained without continuous reinforcement.
6. The effectiveness of a given reinforcer changes over time for each student. Some reinforcers are effective regardless of any specific student. Some students cannot get enough of money, praise, tokens, attention, good marks, etc. Other students want only attention of the driver or aide to continue their good behavior while in transit. Reinforcement must be designed per individual student to be most effective in management of student behaviors in transit.

Basic procedures for applying behavioral management principles for specific students include:

1. Define the appropriate behaviors that you want to encourage the individual student to perform in transit. Notice that the behavioral goal of

the student is a positive one, or something the student should do, rather than a negative goal, something that the student should not do.

2. Reinforce only those student behaviors which you consider to be appropriate (positive) and which you want to increase in frequency in your student passengers. Reinforce the student each time he exhibits the desired behavior. When the behavior has been established and occurs frequently, gradually begin to reinforce it less frequently and with less enthusiasm, until only an occasional smile may be needed to maintain the student's positive behavior while in transit.
3. Define inappropriate student behaviors that you want to discourage while in transit.
4. Ignore the student's behaviors which you consider to be inappropriate unless they are destructive or disruptive to the positive behaviors of others. The absence of driver or aide reinforcement of inappropriate behavior will, over time, cancel out negative behaviors without instituting punishment.
5. Whenever inappropriate behavior occurs in students while in transit that is not destructive or disruptive to others, ignore it. Provide no eye contact, no talking to the student, no attention to the student whatsoever. Don't remind him verbally that he is acting inappropriately. When the inappropriate behaviors stop, even for a moment, and the child begins to behave appropriately instead, be sure to immediately reinforce him enthusiastically with a smile and supporting statement about his positive behavior. Mention nothing about his negative or inappropriate behavior, even though it may have occurred just minutes ago. Remember that, although the inappropriate behavior may seem to be self-reinforcing and not affected by driver or aide ignoring such behavior, it was originally developed and strengthened by the attention of someone. Now student inappropriate behavior in transit is being maintained to a large extent by your negative attention. When the attention for inappropriate behavior stops, the strength of the student inappropriate behavior will weaken. To further help eliminate inappropriate behavior, ignore it whenever it occurs, and constantly reinforce

any incompatible behavior that is appropriate. Since students usually cannot do an inappropriate and an appropriate behavior at the same time, it helps to reinforce the student for doing something positive when he cannot at the same time be doing something negative while in transit.

6. If a student's behavior is self-destructive, or disruptive to others or directly affects the safe operation of the vehicle in transit, or affects the health and welfare of others, a punishment may be necessary. Punishment should only be administered in the manner specified in a behavioral contract drawn up by the school placement committee and agreed to by the student's parents. Such a behavioral contract will specify certain punishments that are acceptable to parents and the school when certain behaviors in the student do occur. Only then can punishment be considered appropriate in the transit situation for individual handicapped students. Only the punishment specified and administered by the designated person is appropriate. Any other punishment taken by the driver exposes the driver to legal repercussions.

DEALING WITH SITUATIONS

Situations inevitably and occasionally arise on the bus or during loading or unloading where students exhibit inappropriate behaviors which impede safe, efficient and economic delivery of adaptive transportation services. Situations occur when the driver or aide's knowledge of individual students is not sufficient to manage their behaviors, particularly when several students are involved. The "domino" or "contagion" effect can easily be observed during transit situations with a group of students who are prodded into further or more serious inappropriate behaviors by each other's behavior. A group of students who are handicapped can quickly degenerate into a group who exhibit high rates of very inappropriate behavior. Such groups are extremely difficult to manage by the driver alone, and at times even with the help of an aide. In these instances, situational controls or situational behavior management is required.

Situational behaviors are typical of handicapped students who, like their non-handicapped peers of the same age, may react differently to a driver or aide in the vehicle than at home or at school with parents or teacher. Situational behaviors are often independent of a particular student's handicapping condition. Groups of handicapped students may take on each other's worst characteristic behaviors for a short period of time when alone they would not act in the same way. Since individuals create behavior management problems that may affect the appropriate or inappropriate behaviors of other students on the bus, providing for adaptive transportation services according to handicapping conditions and service needs is not enough to gain control of the situation. Inappropriate situational behaviors impede the safe, efficient and economic delivery of transportation. The goal of exhibiting appropriate behavior outside the classroom, particularly during transportation, is a worthwhile goal that must be attained through driver and aide behavior management efforts and the support of school and parents.

Situational behavior management problems arise in spite of all the precautions taken by careful drivers and their aides. Where situational behavior management problems do exist in transit, a careful review of what has already been done is often helpful. Included in such a review by the driver and aide is:

1. Were students given clearly to understand that their individual behavior was inappropriate, unacceptable?
2. Were students reminded of the applicable rules so that each individual students understands the rule?
3. Were any particular student's handicapping conditions precluding that student from complying with the rule?
4. Were rules relevant, minimal, meaningful, positively stated?
5. Were rules historically enforced in a fair, firm and friendly manner in the past on the vehicle?
6. Were rules consistently enforced by both the driver and aide at all times in the past, ruling out any previous students who were made exceptions to this rule?
7. Have behavioral contracts already been written by the school, parents and the driver or aide that involve the particular rule being broken or inappropriate behavior being exhibited by the student?
8. Were punishments described per student in his behavioral contract for such inappropriate behavior exhibited?
9. Do the students clearly understand that they have or are behaving inappropriately and what they are doing is clearly wrong?

10. Do the students realize that what they are doing or have been doing is cause for punishment or restrictions?

If all of the above have been answered in the affirmative by the driver and aide and if both driver and aide agree that such answers and precautions have been dealt with, then punishment or restriction or removal from the bus may be called for. When drivers and aides see that rules are known by the students, fairly enforced in the past on their bus, and affect the safety and health of all passengers, necessary enforcement of the rules may involve punishment in many forms. Great care in administering any type of punishment is necessary in consideration for each student, their situation, their handicapping condition(s) and the wishes of their parents and of the school for controls by the school personnel, the driver and aide. Clarizio and McCoy (1976) have offered excellent guidelines for consideration of punishment of inappropriate behaviors in students:

1. Punishment should be used in a corrective way. It is designed to help the student improve now and in the future. It is not to retaliate for wrongdoing in the past.
2. Ideally, punishment should be inherent in the situation rather than the expression of the power of one person over another...The idea is to let the child experience the unpleasant but natural or logical result of his own actions. Used in this way, we can minimize or avoid the dangers associated with one human being's delivering punishment to another.
3. On those occasions when it is necessary for one human being to punish another human being, it should be done in an impersonal, matter-of-fact way. The punishing agent must guard against the tendency to yell or scold, for this indicates that this attitude is one of revenge and often reinforces unacceptable behavior.
4. Once a good rule has been agreed upon, the youngster who violates it should experience the unpleasant consequences of his misbehavior. Excuses and promises are not accepted. There is to be no escape from the unpleasant consequences of the action.
5. A youngster should be given one warning for signal before punishment. The warning may eliminate the need for punishment. Even when the warning proves ineffective, it adds an element of fairness to what follows.

6. The nature of the punishment and the manner of presenting it should avoid the arousal of strong emotional responses in the person punished.
7. (The driver or aide)...must be consistent in the use of punishment.
8. When used contingently and immediately, mild punishment can produce enduring positive change in cases where severe punishment alone fails.
9. Avoid extending periods of punishment (prolonged punishment is forgotten, ignored or adapted to by the child).
10. Combine the use of punishment and reward. Punishment reminds the student what not to do. The reward of appropriate alternative behavior tells the student what he should do.
11. Timing plays an important role in determining the effectiveness of punishment. Available evidence indicates rather consistently that children who are punished early in a given sequence of misbehavior develop greater resistance to temptation than those who are punished only after completion of the misdeed. (Repeated misdeeds make punishment even less effective!)
12. Remove or reduce the magnitude and frequency of the rewards that are maintaining misbehavior. Punishment works much more effectively and efficiently once the rewards that maintain misbehavior are eliminated or decreased.
13. Punishment should be used in a way that fosters self-direction. Provide opportunities for the student to set his own appropriate behavioral goals while letting him experience the consequences of his own actions if he does not meet those goals of appropriate behavior.[4]

It is important to remember that punishment and reward in transit or at school should be clearly specified by the Individual Education Program (IEP) for each student's special educational services. Behavioral contracts that are written by team members, the driver and aide, parents and the student may be incorporated into the IEP. The behavioral contract should specify student on-bus appropriate behaviors, rewards for positive behaviors as well as punishment strategies of inappropriate behaviors. Without clearly stated guidelines for punishment application, both the driver and the aide, as well as other school personnel incur liability for alleged child abuse and/or a legal suit for damages by the parents. Clearly written policies adopted by the school board that effect the punishments that are approved or are stated through policy as appropriate punishment are necessary for the legal protection of the driver and aide. Without written policies, great care in punishing inappropriate behaviors of students must be exercised. Criminal negligence can be asserted in cruel and unusual punishments afforded students by driver and aide when a reasonable and prudent standard for their professional behavior is applied even when policies and procedures, behavioral contracts and written standards for punishment have been given by the school board.

There are five basic elements which behavioral contracts should specify including:

1. The responsibilities which are essential to secure the privilege in terms of the student.
2. The privileges which are to be earned by the student.
3. A system of sanctions for failure to meet the responsibilities.
4. Bonuses for consistently meeting responsibilities should be included.
5. A system to measure behavior and the reinforcements given should be included in the behavioral contract.

Criteria for successful behavioral contracting include several rules or tips:

1. The contract should be positive.
2. The terms of the contract should be explicit describing specific, observable behaviors of the student, the driver and aide toward the student, parents and others.
3. Payoff must be immediate for positive behaviors of the student.
4. Initial contracts should call for and reward close approximations (near misses) of the behavior desired of the student.
5. Rewards should be frequent and in small amounts.
6. Accomplishment rather than obedience should be rewarded.
7. Performance should be rewarded consistently and fairly as well as immediately.
8. Responsibilities and rewards should be of relative equal weight in the perception of the student.
9. The contract should be carried out immediately according to the terms specified in the contract.
10. Remember to revise the contract when needed.

Rules for teaching responsible behavior to students on the school bus that can be incorporated into behavior contracts may include:

1. Deal only with what you can see.
2. Be specific in dealing with behaviors of students.
3. Reinforce behaviors you want to see more of.
4. Don't reinforce behaviors that you don't want to see.
5. Avoid the criticism trap; when speaking to students concentrate on the positive.
6. Grandma's Rule: First you work and then you play.
7. Be specific when negotiating rules with your students.
8. All rules should have specific privileges and consequences (punishments and restrictions) which are understandable and meaningful to the student.
9. Be sure the student understands the rules, privileges and consequences of his behavior.
10. If a rule is broken, do not argue about it; concentrate on the behavior of the student, not the rule.
11. Be sure that you follow through on the rules, privileges, and the consequences.
12. Do not fail to meet any part of your end of the contract with any student.

Situations that occur when one or more students do break rules they clearly understood and knew that their behavior was inappropriate call for appropriate behavioral responses from responsible adults. Responsible adults in the situation during transit are the driver, the aide, parents and school personnel. When behaviors are inappropriate and warrant correction beyond behavior management techniques already attempted by the driver and aide, then punishment may be required. Situational behavior management problems may best be dealt with in a formal, written manner. Adults and students must interact with each other in a fair and reasonable manner concerning student inappropriate behaviors. (To interact in a reasonable manner, behavioral contracts are written that clearly specify not only the student behavior on the bus, loading and unloading and at other sites during transportation, but also the responsibilities and behaviors of the driver and aide.) Behavior management is always a two way street involving students and adults. The requirements to reinforce, or act in certain ways are written down in the behavioral contract that obligate the driver and aide, parents, and school personnel to do certain things along with the student responsibilities. Though written, formal and time-consuming, the behavioral contract method of dealing with situational behaviors of students in transit is considered by the author the safest, most legal, and best method.

MANAGING INAPPROPRIATE STUDENT BEHAVIOR

Management of inappropriate student behavior on the bus can be resolved by several means including:

1. Driver and student conferences.
2. Building principal conference with student and driver.
3. Building principal conference with parents, student and driver.
4. A hearing before the school board or its appointed committee for hearing transportation complaints.

Withdrawal of transportation services is the final punishment applied to students and their parents when sufficiently inappropriate behaviors are noted or are frequently repeated. When behavior management of other students in transit is impossible due to the behavior of the student in question, the withdrawal of transportation services is appropriate.

Many school systems have reporting systems for student inappropriate behaviors which are to be completed by the driver. Such incident reports are of great importance in documenting observed behaviors in the minds of the building principal, parents and the student. Conferences with appropriate persons in attendance, accurate incidence reports available and the parents present generally resolve even the most serious behavior management problems.

Withdrawal from transportation services for a period of time is considered better than any elaborate punishment strategies implemented by the driver. Repeated conferences and withdrawal of transportation services may be followed by building principal action to suspend the student from school temporarily. Later, the final level of punishment reached by the school system is the consideration and decision by the school board to expel the student from school for a semester or for the school year. Criminal proceedings may be instituted at any time during the school system procedures where sufficiently serious inappropriate behavior occurs. Criminal procedures thereby generally remove the control of inappropriate student behavior from the school system and place such control with the courts.

In the context of adaptive transportation services, rewards are far more likely to produce and maintain positive or appropriate student behavior than punishment. Rewards can vary widely from student to student and are limited only to the drivers imagination and ingenuity. When students receive consistent rewards that they select after they have demonstrated appropriate behaviors and have achieved known and accepted behavioral goals most behavior management questions are no longer of concern. Without rewards and utilizing only punishment strategies, even when supported by written school system policy and procedures for the driver and other school personnel, the resources of the driver in managing the behaviors of his charges are extremely limited. The driver becomes little more than a rule enforcer. Instead, and with the appropriate use of rewards for appropriate student behavior on the bus, drivers become respected adults whom students consider in positive terms while receiving adaptive transportation.

Any form of corporal punishment, including removal from the bus en route, is inappropriate for the driver to utilize in managing behaviors of students. Prevention of behavior management problems before they become more serious is by far the best strategy. Prevention generally occurs with the careful and individualized use of rewards for student appropriate behaviors on the bus.

Intervention by the driver before behaviors become more serious or involve other students is the second best strategy. Behavioral contracts are the best expression of intervention by the driver into known inappropriate student behaviors by one or more students for whom he is responsible. Punishment, even though clearly stated in behavioral contracts and student individual education plans (IEP's), and consistent with written school system policy and procedure, is the least effective strategy. Punishment occurs with behaviors that have already been exhibited, are after the fact, and often are delayed several hours, days or weeks before the system applies constraints to the student and his parents.

Rules and rule enforcers must exist in any human endeavor. Rules that are minimal, relevant, meaningful and positively stated as well as generally understood and consistently enforced establish the clearly defined appropriate student behaviors expected in transit. Students with handicapping conditions are reasonably expected to demonstrate appropriate behavior during their bus ride.

SUMMARY

All three sequences of events in dealing with inappropriate behaviors of handicapped students during transit are the major elements of a behavior management system. The three sequences are: (1) Identifying appropriate and inappropriate student behaviors in transit; (2) Dealing with individuals in transit who behave inappropriately; and (3) Dealing with situations in trarsit involving several students who act inappropriately.

Rewards incorporate the most positive strategies for behavioral control of students in transit. Intervention through behavioral contracting and parent conferences are less positive, but generally work well in controlling inappropriate student behavior on the bus. Punishment in its various forms, though appropriate, legal and reasonable has limited effects and should be used with extreme care and with the mutual consent of other responsible adults.

No system of rules alone will adequately control the inappropriate student behaviors exhibited in transit. Only rules that are lived with and believed in by everyone will help to control the behaviors of handicapped students. It may be interesting to note that more inappropriate behaviors occur with non-handicapped students in transit than with the handicapped. A behavior management system for students in transit, therefore, may involve more incidents with non-handicapped students than with the handicapped.

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